SEMESTER SCHEDULE 2011

Week Starts Mm/dd	KEYWORD TOPICS FOR LECTURES	Undergrad Quizes on Halliday	Grad Quizes on Dugatkin
Part 1 (4 weeks). Minds: instinct & intelligence			
8/29	**Unit 1. Living with other animals** : Introduction to the course: what? * Reflections in the mirror: who? * Basic Questions: proximate & ultimate	8-9, 105-111, 140	1-117
		DUE: ASSIGNMENT 1 BLOG INTRO	
9/5	**Unit 2. Adapting to changing worlds** : Learned intelligence * Social transmission * Heritable instinct	133-139	118-187
9/12	**Unit 3. Survival/migration skills**: Adaptations: stressful conditions * Cause & function of migration * Development & evolution of migration	113-131	430-455
9/19	*Review of Part 1 (see study guide)*	**DUE: BLOG 1**	
Part 2 (4 weeks). Social: living in groups			
9/26	**Unit 4. Communicating**: Sensory channels * Flexible signs: learned* Fixed signals: inherited	81-87	400-429
10/3	**Unit 5. Attack & defense** : Intense combat: fight or flight * Minor conflict: escalation & avoidance * Assessment of asymmetry	89-96	456-485
10/10	**Unit 6. Hierarchy:** Social structure: stability/instability * Social function: access to resources * Stress, health & reproduction	97-104	538-564
10/17	*Review of Part 2 (see study guide)*	**DUE: BLOG 2 ASSIGNMENT 2**	
Part 3 (3 weeks). Mating: from birth to maturity			
10/24	**Unit 7. Rearing the young**: Families: helpers * Parental care * Which parent works?	29-39	260-293
11/31	**Unit 8. Mating & birth**: Internal fertilization * External fertilization * Asexual/hermaphroditic	21-27	226-259
11/7	**Unit 9. Courting rituals**: Species specific "flags" * Female choosiness * Male attractiveness	13-19	188-225
		DUE: BLOG 3	
Part 4 (4 weeks). Physical: food & shelter			
11/14	**Unit 10. Hunting**: Group hunters * Solitary hunters * Anti-predator defense	43-55	368-399
11/21	**Unit 11, Foraging & storing**: Generalists * Specialists * Store food	57-63	334-367
11/28	**Unit 12. Creating a home**: Secretions * External objects * Colonies	65-77	317-333
12/5	*Review for comprehensive final exam (see study guide)*	**DUE: BLOG 4 ASSIGNMENT 3 GRAD ASSGNMNT 4**	
12/9	**FINAL EXAM (Fri. 12:30-2:30pm; proctored open book)**	BLOGS 1-4	

VIEW DETAILS ON EACH "WEEK AT A GLANCE"

WEEK 1 AT A GLANCE: UNIT 1. LIVING WITH OTHER ANIMALS

Learning Goal

By the end of this week, you should feel comfortable with where to find the **materials, tools and guide portholes** for this class. The objectives should be clear (**participate, comprehend, inquire, apply**), as well as the sequence of activities to help you learn the material, in preparation for **assessments tied to each objective**. You should be clear about how **Folk Psychology** differs from the **Scientific Perspective** (see tutorials). We need for you to have memorized Tinbergen's keyword concepts (**cause, development, evolution, function**) and how these keywords relate to each other on the **concept map** (see Lecture 1.1 and tutorial). Since you may have learned these same concepts linked to different keywords in previous courses, we need for you to feel confident about different ways of talking about these same general concepts (i.e. natural selection as the foundation of modern biological sciences). You should expect to apply these concepts to new examples that will be introduced in each of the **four parts of the course**, and to think about how to collect evidence to **test hypotheses**. We need you to start now in preparing your own personal answers to the list of questions for the comprehensive final exam ("say no to plagiarism"). You should be clear that you are expected to choose from the course materials your most **relevant examples** to answer each question, and to practice **critical thinking** to distinguish between **scientific sources** and unreliable sources ("detect urban legends"). The details of using the elearning tools can wait until next week.

CHECKLIST FOR WEEK 1

1. Read neo email from instructor and reply to questions
2. go to the **top menu** on the WFSC 422 home page to find **instructions** (pdf downloads) http://wfsc.tamu.edu/jpackard/behavior/wfsc422/
   - ✓ **[Syllabus]** download and read it; decide on textbook and supplements
   - ✓ **[Schedule]** download and read it; mark due dates on your personal calendar
   - ✓ **[Evaluation Criteria]** glance at it and come back to it when you have questions
   - ✓ **[Technical Help]** glance at it and return for troubleshooting tips as needed
   - ✓ **[Resources]** order/purchase the textbook (TIP: differs for grads and undergrads)
3. go to the **tools** on the WFSC 422 home page **right menu**
   - ✓ **[BLOG]** open and read the introductory page; follow the link to the blog comments; introduce yourself; ask for help as needed; skim previous comments on the BLOG questions Q 1.1-1.7 for this week; appreciate the variety of responses and examples
   - ✓ **[ELEARNING]** log in and practice using the tools on the left menu ; respond to email from instructor; open the action items linked to the calendar for this week;
   - ✓ **[LIBRARY]** log in and practice using Web of Knowledge to find peer-reviewed scientific sources relevant to you personally, to prepare your answers to exams
4. Go to the **course content** on the WFSC 422 home page **ACTION ITEMS & STUDY GUIDES**
   - ✓ **[Participate]** read objective 1; do the elearning assignment "Participation"
   - ✓ **[Comprehend]** read objective 2; download and read Part 1 materials; do Quiz 1
   - ✓ **[Inquire]** read objective 3; use the website link to start assignment "Wolf Inquiry"
   - ✓ **[Apply]** read objective 4; use lecture Action Items to prepare Unit 1 exam responses
5. Choose your preferred **guide porthole** on the WFSC 422 home page **bottom menu**
   - ✓ **[Behavior & Biodiversity Stewardship Lab]** meet & choose your guide
   - ✓ Use guide portholes for survival tips tailored to your career interests
   - ✓ BLOG for collaborative learning with like-minded peers

ACTIVITIES BY DAY FOR WEEK 1

Mon.

- **DE students**: participate in 8-9 pm online Chat on elearning; dialogue about your progress on the checklist; ask for clarifications (instructor & peer support)

Tues.

- **All students:** read learning goal; start activities on Week 1 Checklist;
- **On campus students**: 12:45-2:00 pm meet in Nagle 104 for Unit 1 Lecture
- **DE students:** on [comprehend] download & read the zip of Unit 1 Lecture notes

Wed.

- **All students:** comment on BLOG topic **"**2010 Ethology: introducing ourselves" and do "Participation" assignment; do Week 1 assigned reading (see schedule above)
- **DE students:** for those who missed Monday chat, check the chat log; participate in 8-9 pm "make-up chat

Thurs.

- **All students:** finish activities on Week 1 Checklist;
- **On campus students**: meet 12:45-2:00 pm Nagle 104; intro to Inquiry activities
- **DE students:** on [inquiry] read the introduction to the Nature's Partners website; download and skim the Wolf Inquiry materials

Fri.

- **All students:** attempt Quiz 1 (may retake; DUE by Mon. midnight)
- **Grad students:** start thinking about what you would like to do for your open inquiry project (due last class day)

WEEK 2 AT A GLANCE: UNIT 2. ADAPTING TO CHANGING WORLDS

Learning Goal

By the end of this week, you should feel comfortable with BLOG and elearning **tools** (email, calendar, assignments, assessment quizzes). We expect you to be able to explain three ways that animal behavior becomes adapted to changes in the environment: **learned intelligence, social transmission and heritable instinct**. You should clearly understand that each of these adaptive processes occurs on a different **time scale** (respectively: life times, generations, geological eras). For the concept of **learning**, you should have in mind some examples of the trial-by-error mechanisms that shape behaviors as a result of rewards (positive and negative). To illustrate the concept of **social transmission**, you should be able to explain studies with evidence that individuals learned from observing social companions (not only by their own trial and error). For **heritable instinct**, you should be able to explain the evidence needed to determine what aspects of a behavior are "hard-wired", that is controlled more by information in the genes than the environment. You should be clear that instinctive differences between species are shaped by the environment over phylogenetic history due to the **divergence and convergence** of the "gene pool" of each species. To translate these complex ideas to the general public, we need you to relate them to the "**nature vs. nurture**" debate. To relate to other coursework, be able to explain the distinction between **genotype and phenotype**.

CHECKLIST FOR WEEK 2

1. **[Participate]** mix or match what works best for your learning style & time constraints
   - ✓ Check feedback on Participation assignment
   - ✓ Chat about BLOG1 comments on Unit 1 (in classroom or on-line)
   - ✓ Read/dialogue on BLOG1 Unit 2; practice critical thinking skills & scholarly style
   - ✓ Send PS message(s) as needed (preferably via elearning email)

2. **[Comprehend]** synthesize info from readings and lecture notes; store in short term memory
   - ✓ read assigned pages for Unit 2; use study guide Part 1 to focus comprehension
   - ✓ do Quiz 2 on elearning assessment tool; check for feedback on graded quizzes
   - ✓ study Lecture Unit 2; use study guide to relate concepts to reading assignment

3. **[Inquire]** reinforce your comprehension by using information in Guided Inquiry
   - ✓ Explore the contents of the website: Nature's Partners: http://wfsc.tamu.edu/jpackard/scienceinaction/pred1.html
   - ✓ Discover how your experience with dogs relates to course materials in Module 1
   - ✓ Study the background information provided for Module 1 ; start the "Answer" activities
   - ✓ **Grad students**: use elearning discussion tool to start dialogue about choosing a topic for your open inquiry

4. **[Apply]** transfer info from short- to long-term memory; apply concepts to relevant examples
   - ✓ Choose examples from assigned readings to prepare draft responses to BLOG/exam questions for Units 1 & 2; chat and/or BLOG about your ideas
   - ✓ Use the action items from Lecture Units 1 & 2 to guide your search for recent scientific sources for the examples you personally find most interesting and relevant
   - ✓ Start your own draft notes to study for exam questions from Units 1 & 2

ACTIVITIES BY DAY FOR WEEK 2

Mon.	• **All students:** by midnight, do Week 1 & 2 reading; **DUE Quiz 1 & Quiz 2** • **DE students**: participate in 8-9 pm online Chat on elearning; dialogue about your progress on the checklist; ask for clarifications (instructor & peer support)
Tues.	• **All students:** check feedback on Quizes 1 & 2; read Unit 2 learning goal; start Week 2 Checklist; use elearning calendar tool to clarify due dates • **On campus students**: 12:45-2:00 pm meet in Nagle 104 for Unit 2 Lecture (video clips) • **DE students:** download, unzip & read Unit 2 Lecture notes; view linked video clips
Wed.	• **All students:** check feedback on Participation Assignment and BLOG1; do Lecture 2 action items; start BLOG1 Unit 2 questions • **DE students:** check the chat log; optional participation in 8-9 pm "make-up chat
Thurs.	• **All students:** finish activities on Week 2 Checklist; • **On campus students**: meet 12:45-2:00 pm Nagle 104; start Inquiry Module 1 Dogs **DE students:** on [inquiry] read the introduction to the Nature's Partners website; start Predator Inquiry Module 1: Dogs
Fri.	• **All students:** work independently on your draft Module 1 • **Grad students:** dialogue re. your open inquiry project (elearning discussion tool)

WEEK 3 AT A GLANCE: UNIT 3. SURVIVAL/MIGRATION SKILLS

Learning Goal

By the end of this week, you should feel comfortable explaining the **logic of natural selection** and how it is related to the concept map for behavioral adaptations (**cause, development, evolution, function**). We need for you to choose a few good **examples that you personally like** to illustrate behavioral adaptation by applying the logic of natural selection. The reason is so you will be able to refer back to these examples of concepts as we **build on this foundation** throughout the semester. Your examples should relate to the keyword categories of **survival** and/or **migration**. Your **sources** for the scientific studies of these examples may be from the assigned readings or from supplemental readings that you discover on-line. We need for you to apply **critical thinking skills** to distinguish between reliable scientific sources (i.e. peer reviewed) and unreliable sources (i.e. folk psychology or urban legend, undocumented notes). The purpose for the guided inquiry Module 1 is to reinforce your awareness of the distinction between **observation** and **interpretation** (i.e." fact vs. fancy").

CHECKLIST FOR WEEK 3

1. **[Participate]** mix or match what works best for your learning style & time constraints
   - ✓ Chat about Unit 2 BLOG/Exam questions (in classroom or on-line)
   - ✓ Read/dialogue on BLOG1 Unit 3; practice critical thinking & scholarly communication
2. **[Comprehend]** synthesize info from readings and lecture notes; store in short term memory
   - ✓ read assigned pages for Unit 3; use study guide Part 1 to focus comprehension
   - ✓ do Quiz 3; check for feedback on graded quiz
   - ✓ study Lecture Unit 3; use study guide to relate concepts to reading assignment
3. **[Inquire]** reinforce your comprehension by using information in Guided Inquiry
   - ✓ Finish all the learning activities in Predator Module 1
   - ✓ OPTIONAL: Use assignment tool to upload draft Module 1 for interim feedback & return
   - ✓ TIP: Submitting a draft of module 1 is optional but will assist you in staying on task
   - ✓ **Grad students**: continue dialogue about choosing a topic for your open inquiry
4. **[Apply]** transfer info from short- to long-term memory; apply concepts to relevant examples
   - ✓ draft responses to exam questions for Unit 3; chat and/or BLOG about your ideas
   - ✓ Use the action items from Lecture Unit 3 to guide your search for recent scientific sources
   - ✓ Add to your own draft notes to study for exam questions from Unit 3

ACTIVITIES BY DAY FOR WEEK 3

Mon.
- **All students:** by midnight, study Week 3 reading; **DUE Quiz 3**
- **DE students**: participate in 8-9 pm online Chat on elearning

Tues.
- **All students:** check quiz feedback; do Week 3 checklist
- **On campus students**: 12:45-2:00 pm meet in Nagle 104 for Unit 3 Lecture (video clips)
- **DE students:** download, unzip & read Unit 3 Lecture notes; view linked video clips

Wed.
- **All students:** check feedback on BLOG1 Unit2; do Unit 3 action items; start BLOG1 unit 3
- **DE students:** check the chat log; optional participation in 8-9 pm "make-up chat"

Thurs.
- **All students:** finish activities on Week 3 Checklist;
- **On campus students**: meet 12:45-2:00 pm Nagle 104; continue Inquiry Module 1
- **DE students:** continue Inquiry Module 1: Dogs

Fri.
- **All students:** plan to upload your draft Module 1 Inquiry by Monday
- **Grad students:** use the Web of Knowledge to find sources for your open inquiry

WEEK 4 AT A GLANCE: REVIEW OF PART 1. MINDS

Learning Goal

By the end of this week, you should feel comfortable answering the exam questions for Part 1 (Units 1-3), listed in the study guide. You will need to synthesize information from several sources to compose your own original answers (e.g. assigned readings, lecture notes, study guide, supplemental sources and inquiry experiences). We expect you to store this information in long-term memory so that you would have a ready answer to similar questions posed to you in a public setting. The reason for this is to help you prepare to meet on-the-job requirements for skills and knowledge. You should feel that you have gained a "gut feeling" understanding of the material in Part 1, from your experience with the Inquiry Module 1. We expect you to have learned the procedures for the Guided Inquiry activities so you can continue to work independently at your own pace to meet the due date.

CHECKLIST FOR WEEK 4

1. **[Participate]** mix or match what works best for your learning style & time constraints
   - ✓ Chat about BLOG comments for Units 1-3 (in classroom or on-line)
   - ✓ Review BLOG1; score your own cumulative contribution using BLOG criteria
   - ✓ Based on your self assessment, strengthen your BLOG1 by midnight Friday
   - ✓ Send PS message(s) as needed (preferably via elearning email)
2. **[Comprehend]** synthesize info from readings and lecture notes; store in short term memory
   - ✓ Use quiz scores to identify potential confusion over the concept map or examples
   - ✓ Review Lecture notes and assigned reading for Part 1
3. **[Inquire]** reinforce your comprehension by using information in Guided Inquiry
   - ✓ Do all the learning activities in Module 1
   - ✓ Use assignment tool to upload draft Module 1 for interim feedback & return
   - ✓ **Grad students**: continue dialogue about choosing sources for your open inquiry
4. **[Apply]** transfer info from short- to long-term memory; apply concepts to relevant examples
   - ✓ Prioritize the hardest Part 1 exam questions for chat with instructor & peers
   - ✓ Revise your draft responses to exam questions for Part 1
   - ✓ Fine tune your search for reliable scientific info about the examples you chose

ACTIVITIES BY DAY FOR WEEK 4

Mon.
- **All students:** *OPTIONAL:* use elearning assignment tool A2 to submit draft Predator Module 1 for feedback prioritize the hardest exam questions for Part 1
- **DE students**: participate in 8-9 pm online Chat on elearning

Tues.
- **All students:** do Week 4 checklist
- **On campus students**: 12:45-2:00 pm meet in Nagle 104 for Part I Review
- **DE students:** continue to dialogue on BLOG1 Units 1-3;

Wed.
- **All students:** strengthen your draft notes for answers to Part 1 exam questions
- **DE students:** check the chat log; optional participation in 8-9 pm "make-up chat"

Thurs.
- **All students:** finish activities on Week 4 Checklist;
- **On campus students**: meet 12:45-2:00 pm Nagle 104; start Inquiry Module 2
- **DE students:** start Predator Inquiry Module 2

Fri.
- **All students:** finish compiling your own notes on answers to Part I exam Q's; last day to earn participation points for BLOG1 Units 1-3
- **Grad students:** use the Web of Knowledge to fine tune sources for your open inquiry

WEEK 5 AT A GLANCE: UNIT 4. COMMUNICATING

Learning Goal

By the end of this second part of the course, you should feel comfortable explaining social behavior in terms of the logic of natural selection. To do this, you will need to apply what you learned from the concept map in the first part of the course. We start by focusing on examples of communication, as coevolution of adaptations for sending and receiving information. One basic adaptation you will be able to explain is the match between the tuning of the sensory systems used for communication by each species, and the ambient "noise" in the environment. An analogy might be that each species "tunes into a different radio channel". Then you will learn to fine-tune your understanding of instinct and intelligence as it applies to communication. Starting with intelligent communication, you will learn about examples of other species besides humans, where individuals learn the meaning of "signs" (i.e. words) from other members of their social group. An analogy might be learning to speak the language of a family. Finally, you will learn to contrast our flexible communication style with the fixed signals that are instinctive in other species. An anology might be a toy that makes the same sound over and over again. This will reinforce what you learned in the first part of the course, as to why heritable instincts change over geological time scales, in contrast to the short time-scale of learned adaptations.

CHECKLIST FOR WEEK 5

1. **[Participate]** mix or match what works best for your learning style & time constraints
   - ✓ Check update on A1 score for Part 1**;** Clarify any questions about the field trip
   - ✓ Chat about Exam Q's for Unit 4 (in classroom or on-line)
   - ✓ Post comments on BLOG2 Unit 4 (see #4 [Apply] below)
2. **[Comprehend]** synthesize info from readings and lecture notes; store in short term memory
   - ✓ Download Study Guide for Part 2
   - ✓ read assigned pages for Unit 4; use study guide for quiz questions
   - ✓ do Quiz 4 on elearning assessment tool; check for feedback on graded quizzes
   - ✓ study Lecture Unit 4 & view visuals; use study guide to relate to Exam Q's
3. **[Inquire]** reinforce your comprehension by using information in Guided Inquiry
   - ✓ Complete a draft of Module 2 (*optional: upload for feedback on the elearning A2 tool*)
   - ✓ **Grad students**: use elearning discussion tool to dialogue about your open inquiry;
4. **[Apply]** transfer info from short- to long-term memory; apply concepts to relevant examples
   - ✓ Choose examples from assigned readings to draft responses to Unit 4 Exam Q's
   - ✓ Use the action items from Lecture Unit 4 to guide your search for scientific sources
   - ✓ Start your own draft notes to study for exam questions from Units 4

ACTIVITIES BY DAY FOR WEEK 5

Mon.	**All students**: download Part 2 Study Guide; by midnight, study Week 5 reading; **DUE Quiz 4** **DE students**: participate in 8-9 pm online Chat on elearning
Tues.	**All students**: check quiz feedback; do Week 5 checklist **On campus students**: 12:45-2:00 pm meet in Nagle 104 for Unit 4 Lecture (video clips) **DE students**: read Unit 4 Lecture notes; view linked video clips
Wed.	**All students**: start BLOG2 unit 4 **DE students**: check the chat log; optional participation in 8-9 pm "make-up chat"
Thurs.	**All students:** finish activities on Week 5 Checklist; **On campus students**: meet 12:45-2:00 pm Nagle 104; continue Inquiry Module 2 **DE students**: finish Inquiry Module 2: Captive Wolves
Fri.	**All students**: Optional: plan to upload your draft Module 2 Inquiry by Monday **Grad students**: upload a draft list of sources to A4 for feedback (optional)

WEEK 6 AT A GLANCE: UNIT 5 . ATTACK /DEFENSE (BETWEEN STRANGERS)

Learning Goal

Apply your understanding about the coevolution of signaler and receiver, to escalation and de-escalation of conflict between members of the same species (note that this does NOT apply to predator/prey interactions, which are lethal, not social!). By the end of this week, you should be able to explain that instinctive display signals have a function in contests between strangers who have not previously encountered each other, so have not had an opportunity to learn what to expect from each other. These assessment strategies that influence decisions about escalating and de-escalating conflict, have been the subject of computer models called "game theory models". In the computer models, the different strategies are labeled "HAWK", "DOVE" and "BURGEOIS". It is easy to get confused that this refers to actual species of birds; however, they are only labels for a set of rules for playing the game encoded in the computer model. You will be able to explain conflict in terms of the costs and benefits of (1) gaining access to resources while (2) reducing the risk of injury. The "myth busting" in this unit is about animals of the same species will never escalate to the point of killing each other.

CHECKLIST FOR WEEK 6

1. **[Participate]** mix or match what works best for your learning style & time constraints
   - ✓ Prepare for the field trip this weekend (if you have a reserved seat)
   - ✓ Chat about Exam Q's for Unit 5 (in classroom or on-line)
   - ✓ Post comments on BLOG2 Unit 5 (see #4 [Apply] below)
2. **[Comprehend]** synthesize info from readings & lecture notes for short term memory
   - ✓ read assigned pages for Unit 5; use study guide for quiz questions
   - ✓ do Quiz 5 on elearning assessment tool; check for feedback on graded quiz
   - ✓ study Lecture Unit 5 & view visuals; use study guide to relate to Exam Q'
3. **[Inquire]** reinforce your comprehension by using information in Guided Inquiry
   - ✓ Read the Module 3 webpage and start the activities http://wfsc.tamu.edu/jpackard/scienceinaction/pred3.html
   - ✓ **Grad students**: use elearning discussion tool to dialogue about your open inquiry; pace yourself to read your sources by the end of this week
4. **[Apply]** transfer info from short- to long-term memory; apply concepts to examples
   - ✓ Choose examples from assigned readings to draft responses to Unit 5 Exam Q's
   - ✓ Use the action items from Lecture Unit 5 to guide your search for recent scientific sources for the examples you personally find most interesting/relevant
   - ✓ Start your own draft notes to study for exam questions from Unit 5

ACTIVITIES BY DAY FOR WEEK 6

Mon.	**All students**: study Week 6 reading; **DUE Quiz 5** **DE students**: participate in 8-9 pm online Chat on elearning
Tues.	**All students**: check quiz feedback; do Week 6 checklist **On campus students**: 12:45-2:00 pm meet in Nagle 104 for Unit 5 Lecture (video clips) **DE students**: download, unzip & read Unit 5 Lecture notes; view linked video clips
Wed.	**All students**: start BLOG2 unit 5 **DE students**: check the chat log; optional participation in 8-9 pm "make-up chat"
Thurs.	**All students:** finish activities on Week 6 Checklist; **On campus students**: meet 12:45-2:00 pm Nagle 104; start Inquiry Module 3 **DE students**: start Inquiry Module 3: Wild Wolves
Fri.	**All students**: finish draft responses for Unit 5 exam Q's **Grad students**: read sources for your open inquiry

WEEK 7 AT A GLANCE: UNIT 6 . HIERARCHY (WITHIN FAMILIAR GROUPS)

Learning Goal

Learn to analyze the dynamics of social behavior within groups, where the individuals in the group learn subtle signs of escalation and de-escalation in the context of changing access to resources. By the end of the unit, students should be able to (1) explain three hypotheses about social structure (stable, unstable, fixed castes), (2) explain 3 hypotheses about the function of social structure (hard times, severe environment, biders), and (3) explain why it is important to consider social structure in managing stress and reproduction in captive groups.

CHECKLIST FOR WEEK 7

1. **[Participate]** mix or match what works best for your learning style & time constraints
   - ✓ Chat about Exam Q's for Unit 6 (in classroom or on-line)
   - ✓ Post comments on BLOG2 Unit 6 (see #4 [Apply] below)
   - ✓ Send PS message(s) as needed (preferably via elearning email)
2. **[Comprehend]** synthesize info from readings and lecture notes; for short term memory
   - ✓ read assigned pages for Unit 6; use study guide for quiz questions
   - ✓ do Quiz 6 on elearning assessment tool; check for feedback on graded quizzes
   - ✓ study Lecture Unit 6 & view video visuals; use study guide to relate to Exam Q'
3. **[Inquire]** reinforce your comprehension by using information in Guided Inquiry
   - ✓ Complete a draft of Module 3 (*optional: upload for feedback on elearning A2*)
   - ✓ **Grad students**: use elearning discussion tool to dialogue about your open inquiry; pace yourself to prepare an outline by the end of this week
4. **[Apply]** transfer info from short- to long-term memory; apply concepts to examples
   - ✓ Choose examples from assigned readings to draft responses to Unit 6 Exam Q's
   - ✓ Use the action items from Lecture Unit 6 to guide your search for recent scientific sources for the examples you personally find most interesting/relevant
   - ✓ Start your own draft notes to study for exam questions from Unit 6

ACTIVITIES BY DAY FOR WEEK 7

Mon.	**All students**: study Week 7 reading; **DUE Quiz 6** **DE students**: participate in 8-9 pm online Chat on elearning
Tues.	**All students**: check quiz feedback; do Week 7 checklist **On campus students**: 12:45-2:00 pm meet in Nagle 104 for Unit 6 Lecture (video clips) **DE students**: download, unzip & read Unit 6 Lecture notes; view linked video clips
Wed.	**All students**: start BLOG2 unit 6 **DE students**: check the chat log; optional participation in 8-9 pm "make-up chat"
Thurs.	**All students:** finish activities on Week 7 Checklist; **On campus students**: meet 12:45-2:00 pm Nagle 104; continue Inquiry Module 3 **DE students**: finish Inquiry Module 3: Field Studies of Wolves
Fri.	**All students**: Optional: plan to upload your draft Module 3 Inquiry by Monday **Grad students**: upload a draft outline to A4 for feedback (optional)

WEEK 8 AT A GLANCE: REVIEW OF PART 2. SOCIAL

Learning Goal

By the end of Part 2, "Social", you should feel comfortable applying the logic of natural selection (CDEF) to examples of behavioral adaptations for animals living in groups. We started out with examples of communication, focusing on distinguishing between the instinctive and learned aspects. You should be able to explain how human communication is similar and different from other species. Applying to fighting behavior, your understanding about the coevolution of signaler and receiver, you should be able to explain how intense combat and display signals function in contests between relative strangers. The assessment strategies that influence decisions about escalating and de-escalating conflict, you will be able to explain in terms of the costs and benefits of gaining access to resources while reducing risk of injury. Finally, examples from hierarchies of individuals within familiar groups illustrate how group structure fits on a continuum, determined by genes (e.g. the social insects at the fixed extreme) to individual development and learning within family groups (e.g. long-lived mammals at the flexible extreme). Be prepared to explain the practical implications of understanding the structure and function of behavior in groups, for managing stress of animals in captivity and the wild.

CHECKLIST FOR WEEK 8

1. **[Participate]** mix or match what works best for your learning style & time constraints
   - ✓ Chat about BLOG comments for Units 4-6 (in classroom or on-line)
   - ✓ Review BLOG2; score your own cumulative contribution using BLOG criteria
   - ✓ Based on your self assessment, strengthen your BLOG2 by midnight Friday
2. **[Comprehend]** synthesize info from readings and lecture notes; store in short term memory
   - ✓ Review assigned pages for Part 2;
   - ✓ Use quiz scores to identify where you need to focus your review efforts
   - ✓ Review Lecture notes for Part 2
3. **[Inquire]** reinforce your comprehension by using information in Guided Inquiry
   - ✓ Plan to upload your final draft of all 3 Predator Inquiry modules by Friday
   - ✓ **Grad students**: good week to slack off on your open inquiry
4. **[Apply]** transfer info from short- to long-term memory; apply concepts to examples
   - ✓ Prioritize the hardest Part 1 exam questions for chat with instructor & peers
   - ✓ Revise your draft responses to exam questions for Part 2
   - ✓ Fine tune your search for reliable scientific info about the examples you chose

ACTIVITIES BY DAY FOR WEEK 8

Mon.	**All students:** upload and submit draft Module 3 for feedback through elearning assignment dropbox; prioritize the hardest exam questions for Part 2; choose Q's to chat about **DE students**: participate in 8-9 pm online Chat on elearning
Tues.	**All students:** do Week 8 checklist **On campus students**: 12:45-2:00 pm meet in Nagle 104 for Part 2 Review **DE students:** continue to dialogue on BLOG2 Units 4-6;
Wed.	**All students:** strengthen your draft notes for answers to Part 2 exam questions **DE students:** check the chat log; optional participation in 8-9 pm "make-up chat"
Thurs.	**All students:** finish activities on Week 8 Checklist; **On campus students**: meet 12:45-2:00 pm Nagle 104; start deer inquiry
Fri.	**All students:** by midnight, upload your final A2 Predator Inquiry (all three modules); last day to earn participation points for BLOG2 Units 4-6 **Grad students:** good week to slack on your open inquiry

WEEK 9 AT A GLANCE: UNIT 7 REARING THE YOUNG

Learning Goal

Learn how the basis of sociality is "extended families", where older siblings don't disperse and do care for young of their parents (or close relatives). This is in contrast to asocial species where many young are produced, but each receives little care. By the end of this unit, you will be able to explain why stable family units with lots of care are more typical of stable environments, and "many expendable young" are more associated with fluctuating or unpredictable environments. Also, which parent cares for the offspring is a result of whether both the father and mother can provide nutrition (e.g. songbirds, wolves) or whether only the mother cares for young (i.e. turkey, deer). This sets the basis for the evolution of mating systems (Unit 8) and mate choice (Unit 9).

CHECKLIST FOR WEEK 9

1. **[Participate]** mix or match what works best for your learning style & time constraints
   - ✓ Check update on A1 score for Part 2 (send PS if needed)
   - ✓ Chat about Exam Q's for Unit 7 (in classroom or on-line)
   - ✓ Post comments on BLOG3 Unit 7 (see #4 [Apply] below)
2. **[Comprehend]** synthesize info from readings and lecture notes; store in short term memory
   - ✓ Download Study Guide for Part 3
   - ✓ read assigned pages for Unit 7; use study guide for quiz questions
   - ✓ do Quiz 7 on elearning assessment tool; check for feedback on graded quizzes
   - ✓ study Lecture Unit 7 & view visuals; use study guide to relate to Exam Q's
3. **[Inquire]** reinforce your comprehension by using information in Guided Inquiry A3
   - ✓ Complete a draft of Prey Module1 (*optional: upload for feedback on the elearning A3 tool*) http://wfsc.tamu.edu/jpackard/scienceinaction/prey1.html
   - ✓ For A3 assistance, use the elearning discussion tool or the link on BLOG webpage
   - ✓ **Grad students**: use elearning discussion tool to dialogue about your open inquiry A4; pace yourself to draft an outline by the end of this week
4. **[Apply]** transfer info from short- to long-term memory; apply concepts to relevant examples
   - ✓ Choose examples from assigned readings to draft responses to Unit 7 Exam Q's
   - ✓ Use the action items from Lecture Unit 7 to guide your search for recent scientific sources for the examples you personally find most interesting and relevant
   - ✓ Start your own draft notes to study for exam questions from Unit 7

ACTIVITIES BY DAY FOR WEEK 9

Mon.	**All students**: download Part 3 Study Guide; by midnight, study Unit 7 reading; **DUE Quiz 7** **DE students**: participate in 8-9 pm online Chat on elearning
Tues.	**All students**: check quiz feedback; do Week 9 checklist **On campus students**: 12:45-2:00 pm meet in Nagle 104 for Unit 7 Lecture (video clips) **DE students**: read Unit 7 Lecture notes; view linked video clips
Wed.	**All students**: start BLOG3 unit 7 **DE students**: check the chat log; optional participation in 8-9 pm "make-up chat"
Thurs.	**All students:** finish activities on Week 9 Checklist; **On campus students**: meet 12:45-2:00 pm Nagle 104; continue Inquiry Module 3.1 **DE students**: complete draft Inquiry Module 3.1
Fri.	**All students**: Optional: plan to upload your draft Module 3.1 Inquiry by Monday **Grad students**: upload a draft outline to A4 for feedback (optional)

WEEK 10 AT A GLANCE: UNIT 8. MATING & BIRTH

Learning Goal

In this unit, you will discover the fascinating diversity of mating systems. Previously, we learned about those species that are unusual because they provide care for a few well-developed offspring. Here, we expand our examples, including those species without much parental behavior; instead, these species produce many small offspring. The basic reproductive strategy of each species (a few big, or many small) "sets the stage" for co-evolution of male and female strategies in each species.

CHECKLIST FOR WEEK 10

1. **[Participate]** mix or match what works best for your learning style & time constraints
   - ✓ Chat about Exam Q's for Unit 8 (in classroom or on-line)
   - ✓ Post comments on BLOG3 Unit 8 (see #4 [Apply] below)
2. **[Comprehend]** synthesize info from readings & lecture notes for short term memory
   - ✓ read assigned pages for Unit 8; use study guide for quiz questions
   - ✓ do Quiz 8 on elearning assessment tool; check for feedback on graded quiz
   - ✓ study Lecture Unit 8 & view visuals; use study guide to relate to Exam Q"s
3. **[Inquire]** reinforce your comprehension by using information in Guided Inquiry A3
   - ✓ Read the Prey Module 2 webpage and start the activities
   - ✓ **Grad students**: use elearning discussion tool to dialogue about your open inquiry; pace yourself to revise your draft outline by the end of this week
4. **[Apply]** transfer info from short- to long-term memory; apply concepts to examples
   - ✓ Choose examples from assigned readings to draft responses to Unit 8 Exam Q's
   - ✓ Use the action items from Lecture Unit 8 to guide your search for recent scientific sources for the examples you personally find most interesting/relevant
   - ✓ Start your own draft notes to study for exam questions from Unit 8

ACTIVITIES BY DAY FOR WEEK 10

Mon.
- **All students**: study Unit 8 reading; **DUE Quiz 8**
- **DE students**: participate in 8-9 pm online Chat on elearning

Tues.
- **All students**: check quiz feedback; do Week 10 checklist
- **On campus students**: 12:45-2:00 pm meet in Nagle 104 for Unit 8 Lecture
- **DE students**: read Unit 8 Lecture notes; view linked video clips (*OPTIONAL: view the mp4 videos of lectures, email feedback on how well this option works for you)*

Wed.
- **All students**: start BLOG3 unit 8
- **DE students**: check the chat log; optional participation in 8-9 pm "make-up chat"

Thurs.
- **All students:** finish activities on Week 10 Checklist;
- **On campus students**: meet 12:45-2:00 pm Nagle 104; start Prey Inquiry Module 2
- **DE students**: start Prey Inquiry Module 2

Fri.
- **All students**: finish draft responses for Unit 8 exam Q's
- **Grad students**: (optional) revise draft outline for open inquiry based on feedback

WEEK 11 AT A GLANCE: UNIT 9. COURTING RITUALS

Learning Goal

A small percentage of species display instinctive rituals during courting, yet these species are the ones who catch public attention! In this unit, learn about the signals that have evolved with the function of sending information about species identity. After male and female have found "the right" species, there is still more communication about the resources each offers. In species where the females are choosy, males compete in attracting mates. Learn how you might test such hypotheses.

CHECKLIST FOR WEEK 11

1. **[Participate]** mix or match what works best for your learning style & time constraints
   - ✓ Chat about Exam Q's for Unit 9 (in classroom or on-line)
   - ✓ Post comments on BLOG3 Unit 9 (see #4 [Apply] below)
2. **[Comprehend]** synthesize info from readings and lecture notes; for short term memory
   - ✓ read assigned pages for Unit 9; use study guide for quiz questions
   - ✓ do Quiz 9 on elearning assessment tool; check for feedback on graded quizzes
   - ✓ study Lecture Unit 9 & view video visuals; use study guide to relate to Exam Q'
3. **[Inquire]** reinforce your comprehension by using information in Guided Inquiry
   - ✓ Complete a draft of Prey Module 2 (*optional: upload for feedback on elearning A3*)
   - ✓ **Grad students**: use elearning discussion tool to dialogue about your open inquiry; pace yourself to start drafting your inquiry product by the end of this week
4. **[Apply]** transfer info from short- to long-term memory; apply concepts to examples
   - ✓ Choose examples from assigned readings to draft responses to Unit 9 Exam Q's
   - ✓ Use the action items from Lecture Unit 6 to guide your search for recent scientific sources for the examples you personally find most interesting/relevant
   - ✓ Start your own draft notes to study for exam questions from Unit 9

ACTIVITIES BY DAY FOR WEEK 11

Mon.
- **All students**: study Unit 9 reading; **DUE Quiz 9**
- **DE students**: participate in 8-9 pm online Chat on elearning

Tues.
- **All students**: check quiz feedback; do Week 11 checklist
- **On campus students**: 12:45-2:00 pm meet in Nagle 104 for Unit 9 Lecture
- **DE students**: read Unit 9 Lecture notes; view linked video clips

Wed.
- **All students**: start BLOG3 unit 9
- **DE students**: check the chat log; optional participation in 8-9 pm "make-up chat"

Thurs.
- **All students:** finish activities on Week 11 Checklist;
- **On campus students**: meet 12:45-2:00 pm Nagle 104; continue Prey Module 2
- **DE students**: finish Prey Module 2

Fri.
- **All students**: finish BLOG3; **LAST DAY TO EARN POINTS ON BLOG3**
- **Grad students**: work independently on drafting your inquiry product

WEEK 12 AT A GLANCE: UNIT 10. HUNTING

Learning Goal

When animals hunt, you will learn to predict what size group they will join, by thinking about the tradeoffs of fitness costs and benefits. For those that do not join groups, the solitary hunters, learn to recognize the distinct stages of the predator "behavior chain" and how instinct interacts with learning in shaping hunting tactics. Finally, learn to explain why anti-predator and predator defenses have co-evolved in the historical steps described as an evolutionary "Arms Race".

CHECKLIST FOR WEEK 12

1. **[Participate]** mix or match what works best for your learning style & time constraints
   - ✓ Chat about Exam Q's for Unit 10 (in classroom or on-line)
   - ✓ Post comments on BLOG4 Unit 10 (see #4 [Apply] below)
2. **[Comprehend]** synthesize info from readings and lecture notes; store in short term memory
   - ✓ Download study guide for Part 4
   - ✓ do Quiz 10
   - ✓ Review Lecture notes for Unit 10
3. **[Inquire]** reinforce your comprehension by using information in Guided Inquiry
   - ✓ Start Prey Module 3
   - ✓ **Grad students**: keep working on your open inquiry
4. **[Apply]** transfer info from short- to long-term memory; apply concepts to examples
   - ✓ **Answer the elearning email questions about your preferred option for Exam**
   - ✓ Revise your draft responses to exam questions for Unit 10
   - ✓ Fine tune your search for reliable scientific info about the examples you chose

ACTIVITIES BY DAY FOR WEEK 12

Mon.
- **All students:** study Unit 10 reading; **DUE Quiz 10**
- **DE students**: participate in 8-9 pm online Chat on elearning

Tues.
- **All students:** do Week 12 checklist
- **On campus students**: 12:45-2:00 pm meet in Nagle 104 for Unit 10 lecture
- **DE students:** read Unit 10 Lecture notes; view linked video clips

Wed.
- **All students:** start BLOG4 unit 10
- **DE students:** check the chat log; optional participation in 8-9 pm "make-up chat"

Thurs.
- **All students:** finish activities on Week 12 Checklist;
- **On campus students**: meet 12:45-2:00 pm Nagle 104; start Prey Module 3
- **DE students:** start Prey Module 3

Fri.
- **All students:** finish draft responses for Unit 10 exam Q's
- **Grad students:** work independently on drafting your inquiry product

WEEK 13 AT A GLANCE: UNIT 11. FORAGING & STORING

Learning Goal
Learn to distinguish between generalist and specialist diets, and to relate these differences to the ways in which the availability of food changes in the environments of species with specialist (predictable food supply) compared to generalist (unpredictable, changing food supply) strategies. Finally, for those species that predictably encountered months when no food was available, learn how they evolved adaptations to store nutrients inside or outside their bodies..

CHECKLIST FOR WEEK 13

1. **[Participate]** mix or match what works best for your learning style & time constraints
   - ✓ Chat about Exam Q's for Unit 11 (in classroom or on-line)
   - ✓ Post comments on BLOG4 Unit 11 (see #4 [Apply] below)
2. **[Comprehend]** synthesize info from readings and lecture notes; store in short term memory
   - ✓ do Quiz 11
   - ✓ Review Lecture notes for Unit 11
3. **[Inquire]** reinforce your comprehension by using information in Guided Inquiry
   - ✓ Complete a draft of Module 3 (*optional: upload for feedback on the elearning A3 tool*)
   - ✓ **Grad students**: OPTIONAL: upload draft A4 inquiry product for feedback
4. **[Apply]** transfer info from short- to long-term memory; apply concepts to relevant examples
   - ✓ **Finalize arrangements for proctor if you chose the off-campus exam option**
   - ✓ Revise your draft responses to exam questions for Unit 11
   - ✓ Fine tune your search for reliable scientific info about the examples you chose

ACTIVITIES BY DAY FOR WEEK 13

Mon. • **All students**: study Unit 11 reading; **DUE Quiz 4** • **DE students**: participate in 8-9 pm online Chat on elearning
Tues. • **All students**: check quiz feedback; do Week 5 checklist • **On campus students**: 12:45-2:00 pm meet in Nagle 104 for Unit 4 Lecture (video clips) • **DE students**: download, unzip & read Unit 4 Lecture notes; view linked video clips
Wed. • **All students**: start BLOG4 unit 11 • **DE students**: check the chat log CHAT CANCELLED
Thurs. HOLIDAY
Fri. HOLIDAY

WEEK 14 AT A GLANCE: UNIT 12. CREATING A HOME

Learning Goal

We humans think we are so smart because we engineer our environments and build big cities. Learn which species use materials from their bodies or their environment to build structures, and how instinct and learning interact in development of these behaviors. Finally, explain why the instinctive building strategies have diverged in the evolutionary history of the social insects.

CHECKLIST FOR WEEK 14

1. **[Participate]** mix or match what works best for your learning style & time constraints
   - ✓ Do the online course evaluation at http://pica.tamu.edu
   - ✓ Chat about Exam Q's for Unit 12 (in classroom or on-line)
   - ✓ Post comments on BLOG4 Unit 12 (see #4 [Apply] below)
   - ✓ Friday is the last day to earn points for posting to BLOG4
2. **[Comprehend]** synthesize info from readings & lecture notes for short term memory
   - ✓ read assigned pages for Unit 12; use study guide for quiz questions
   - ✓ do Quiz 12
   - ✓ study Lecture Unit 12 & view visuals; use study guide to relate to Exam Q's
3. **[Inquire]** reinforce your comprehension by using information in Guided Inquiry
   - ✓ Revise and complete final Prey Inquiry Modules 1-3
   - ✓ **Grad students**: use feedback to revise final Open Inquiry Product
   - ✓ Plan ahead to submit A3 and A4 by Tuesday of next week
4. **[Apply]** transfer info from short- to long-term memory; apply concepts to examples
   - ✓ Choose examples from assigned readings to draft responses to Unit 12 Exam Q's
   - ✓ Use the action items from Lecture Unit 12 to guide your search for scientific sources
   - ✓ Start your own draft notes to study for exam questions from Unit 12

ACTIVITIES BY DAY FOR WEEK 14

Mon.
- **All students**: study Unit 12 reading; **DUE Quiz 12; do online course evaluation**
- **DE students**: participate in 8-9 pm online Chat on elearning; identify proctor for exam

Tues.
- **All students**: check quiz feedback; do Week 14 checklist
- **On campus students**: 12:45-2:00 pm meet in Nagle 104 for Unit 12 Lecture (video clips)
- **DE students**: read Unit 12 Lecture notes; view linked video clips

Wed.
- **All students**: start BLOG4 unit 12
- **DE students**: check the chat log; optional participation in 8-9 pm "make-up chat"

Thurs.
- **All students:** finish activities on Week 6 Checklist;
- **On campus students**: meet 12:45-2:00 pm Nagle 104; continue Prey Module 3
- **DE students**: finish Prey Module 3; email name and contact info for proctor

Fri.
- **All students**: finish draft Unit 12 exam Q's; last day to earn participation points for BLOG4
- **Grad students**: finalize your Open Inquiry product

WEEK 15 AT A GLANCE: REVIEW FOR COMPREHENSIVE EXAM

Learning Goal

To prepare yourself to answer random questions from the list of "Q's from the Public", by storing the information in long term memory, organized in a manner consistent with the logic of natural selection (AB=CDEF). You will be expected to communicate in terms of the scientific perspective, making it clear when you are using a folk psychology perspective to interpret the science. Be prepared to provide information on your sources (author, date), so the material can be checked for accuracy and plagiarism. The general criteria for evaluating answers to questions will be: concept, example, source. Personal experience, course handouts, and personal communication may count as a relevant example, but will not be rewarded with a point for a scientific source. Points will be subtracted for inaccurate information and plagiarism. The exam is open book and notes, A proctor will be provided for on-campus exam sites. ***ALL OFF-CAMPUS EXAM SITES AND PROCTORS MUST BE APPROVED IN WRITING BY MONDAY.***

CHECKLIST FOR WEEK 15

1. **[Participate]** mix or match what works best for your learning style & time constraints
   - ✓ Chat about BLOG comments for Parts 1-4 (in classroom or on-line)
   - ✓ You may continue to post to all BLOGs (no participation points will be scored)
2. **[Comprehend]** synthesize info from readings and lecture notes; for short term memory
   - ✓ Review all assigned readings
   - ✓ Review all lecture notes
3. **[Inquire]** reinforce your comprehension by using information in Guided Inquiry
   - ✓ Complete your final draft of the Prey Inquiry Modules 1-3; upload to A3
   - ✓ **Grad students**: upload and submit your final Open Inquiry product to A4
4. **[Apply]** transfer info from short- to long-term memory; apply concepts to examples
   - ✓ **Respond to email about choice of exam format option**
   - ✓ Prioritize the hardest exam questions for chat with instructor & peers
   - ✓ Revise your draft responses to exam questions for Parts 1-4
   - ✓ Fine tune your search for reliable scientific info about the examples you chose

ACTIVITIES BY DAY FOR WEEK 15

Mon.
- **All students**: Prioritize the hardest exam questions for chat LAST DAY to finalize exam options (see next page)
- **DE students**: participate in 8-9 pm online Chat on elearning; finalize proctor

Tues.
- **All students**: do Week 15 checklist; **DUE: A3 & A4**
- **On campus students**: 12:45-2:00 pm meet in Nagle 104 for Review Parts 1-4

Wed.
- **All students**: NO MEETINGS OR CHATS- READING DAY

Thurs
- **All students**: NO MEETINGS OR CHATS- READING DAY

Fri.
- **All students**: FINAL EXAM (late submit on A3 & A4 closes at midnight)

FINAL EXAM SCHEDULE: FRIDAY 12:30-2:30 PM

PROCTORED OPTIONS FOR TAKING EXAM MUST BE PREVIOUSLY APPROVED

A. On Campus Paper Format
- Meet in Nagle 104; assigned seat
- Be prepared to show photo-ID and open book/notes (no plagiarism)

B. On Campus Online Format
- Meet in Nagle 110; assigned computer; elearning assessment tool
- Be prepared to show photo-ID and open book/notes (no plagiarism)
- NO "cut and paste" from electronic files (to be fair to those who take paper format)

C. Off-Campus Online Format
- Meet at the computer that your proctor has specified; elearning assessment tool
- Be prepared to show photo-ID and open book/notes (no plagiarism)
- NO "cut and paste" from electronic files (to be fair to those who take paper format)
- Proctor sign & send "PROCTOR FORM" (FAX: 979-845-3786, j-packard@tamu.edu

D. Off-Campus Paper Format
- Meet in the room at the time and date that your proctor has specified
- Be prepared to show photo-ID and open book/notes (no plagiarism)
- Proctor sign & send "PROCTOR FORM" with EXAM (FAX: 979-845-3786, j-packard@tamu.edu