



NATURE BOWL COACHES' ORIENTATION PACKET

OVERVIEW

Purpose:

The Nature Bowl is a team competition and learning experience for 3rd- 6th grade students. Activities focus on regional ecology, natural history and conservation. Its purpose is to motivate students, reinforce environmental concepts, connect science to the environment, and involve students in community conservation projects. The Nature Bowl also serves as a model for teachers to use in their environmental education instruction.

History:

The Nature Bowl started as a youth activity in the teacher-oriented Delta Environmental Education Resources (DEER) Fair in 1986. As the Nature Bowl quickly grew in popularity, the DEER Coalition, a group of environmental educators representing local agencies and organizations, shifted its efforts to focus on the Nature Bowl. The Nature Bowl serves students and teachers from counties of the Sacramento Valley, Delta, foothills and Sierra Nevada.

To assist coaches in preparing their students for the NATURE BOWL and to promote environmental education as an integral part of the curriculum, regional orientations serve to introduce activities and format. One extended workshop is also available for interested parents and/or teachers.

Teams:

Any school may send one 3rd/4th grade and one 5th/6th grade team to the semi-finals. Teachers, Parents or Youth Leaders may coach a team. Regional semi-finals are conducted in March and April and the finals will be held on May 9, 2020 at Camp Pollock in Sacramento.



NATURE BOWL ACTIVITIES

OUTDOOR INVESTIGATIONS

Team of 3: Each team answers a set of questions along an outside trail. Each question will have a time limit. Emphasis is on observation skills and teamwork for problem solving. A judge/ monitor will record answers. *A teacher may observe by following a team that is not their own and by remaining unobtrusive.*



NATURE RELAY

Team of up to 9: Items representing environmental concepts are placed on a snow saucer. Team members line up opposite the saucer and rotate one at a time to saucer to retrieve the item that represents the concept announced by the facilitator. Many glossary words are used in this event. All team members are encouraged to participate.

TEAM PROBLEMS

Team of 3: The judges will read a question and the teammates quietly discuss, agree on an answer, and write it on their answer sheet. Often pictures, puppets, skulls, bones, or other items are used to discern the answers. Judges will call upon one team member to present the team's answer. All answers must be written on the answer sheet provided unless otherwise specified. There are often multiple parts, and part-credit can be earned. Team problems might include charades or songwriting.

BELL-RINGERS

Team of 3: Short answer questions are given for all teams to answer on a "first-ring" basis. Each team will have a bell to signal an answer. The individual who rings in first is called upon to answer. If the answer is incorrect or if that student can't come up with the answer within three seconds, the next team to ring in is called upon. The individual from that team who rang the bell can then answer.

ENVIRO-MERCIAL

3 Individuals: Each of 3 students will have up to 60 seconds to present an individual commercial focusing on a local or regional environmental problem and solution. The judges will ask questions after a commercial has been presented. These presentations are prepared for in advance of Nature Bowl.

NATURE GAME (if schedule permits)

Whole Team: will participate in a nature game. No preparation is needed. Be ready for an active thought-provoking experience. All students are encouraged to participate.

FINALS: For teams advancing to the finals, new activities may be added to extend learning and provide a new challenge for participants. All advancing teams will be given information regarding any new activities shortly after the last semi-finals event concludes.

GENERAL PARTICIPATION RULES

SEMI-FINALS AND FINALS

1. Up to 9 children may be on a team. **Only 3 members participate in any given round** unless indicated by the judges (e.g. all students can do Relay and Game). During the finals only, 4 members may compete in Outdoor Investigations.
2. Teams earn points for correct answers. Partial credit may be given at the judge's discretion. **No points will be lost for an incorrect answer.** If students are unsure of an answer, they should guess. You have nothing to lose. You may be right!
3. Teams should listen to the complete question before answering. **Team members must wait for the judge to ask them for their answer.** Participants must be quiet while other children are giving answers.
4. Team member, parents and/or the teacher/coach are not allowed to attend any other session of the NATURE BOWL semi-finals. Your doing so may result in your disqualification. **In addition, recording voice or video is prohibited.**

COACHES' PREPARATION CHECKLIST

Before the Event

- Acquaint students with NATURE BOWL
 - a fun event; teamwork is emphasized
 - opportunity to apply their knowledge of the environment
 - review rules and format
 - focus on regional environments and conservation of natural resources
- Attend orientation workshops to get to know NATURE BOWL format.
- If you can, visit semi-finals site with students (arrange a guided tour, too)
- Practice enviro-mercials (in front of others) --multiple times!
- Invite parents, administrators, other teachers, PTA to hear presentations.



- Include time for awards ceremony in planning transportation logistics
- Confirm transportation arrangements with everyone, including the SITE COORDINATOR (and have back-up plan.)
- Contact your school's public information officer or local media for coverage

Day of Event

- Dress for the weather
- **Please** contact site if you will be late or unable to attend!
- Review format, rules; stress teamwork
- Bring snack and lunch
- Arrive early to register, use restrooms, etc.
- Get comfortable, relax
- Stay for awards ceremony



After the Event

- Encourage students to continue studying the environment and get involved in local issues and activities.
- Write an article for PTA/school newsletter about your experiences at Nature Bowl
- Recognize team at school assembly
- Share enviro-mercials with schoolmates

Most importantly - ENJOY YOUR NATURE BOWL!

GETTING STARTED

How do I get started? Here are some suggestions gathered from former coaches that may help guide you.

- Start with the CDFW website: www.wildlife.ca.gov.
- If you search the term Nature Bowl, it will take you to a section where there is general information, the schedule, and a link to a resources page. If you have ideas for the resources page, please send them to the coordinator.
- A great source of information is the **California Education and the Environment Initiative (EEI)**. Find curriculum and webinars at www.Californiaeei.org.

- Visit www.creec.org. This is the **California Regional Environmental Education Community (CREEC)**, administered by the California Department of Education. It is a site designed to link teachers to high quality environmental education resources.

COACHES' WORKSHOPS



Two workshop options are available for coaches. The mini-workshops take place on weekdays after school. Returning coaches find this one convenient for receiving the coaches' packet and any new updates about Nature Bowl. Questions are answered, and the event format is reviewed.

The half-day workshop is on a Saturday and is recommended for new coaches. This workshop begins with an overview of the Greater Sacramento Valley region's natural history and ecosystems and ends with a sampling of Nature Bowl activities. Coaches get the full experience of what the Nature Bowl is all about. This workshop will help you get started and provide ideas for fun learning activities to do with your team.



ASSEMBLING A TEAM/TEAM MEETINGS

Coaches use many different methods to recruit a team. Here are a few.

- Give a class presentation about Nature Bowl to solicit interest.
- Send a flyer home describing Nature Bowl and ask those interested to contact you.
- Put an article about Nature Bowl in the school newsletter or your class website describing the event and the date for those interested to meet.
- Have an evening meeting and invite parents too, to hear about Nature Bowl. This may help you get a co-coach.
- Offer Nature Bowl as an after-school enrichment activity. Many schools have funds that support these kinds of classes. Meet at lunch with the Nature Bowl Team. This way you can meet often and for short periods of time while they're eating.
- If you are a teacher, integrate environmental education into your curriculum. For example, have all students do an enviro-mercial and have the class pick those to represent their school.

WHEN TO START

Most teams begin to get organized and start meeting in January. Usually coaches wait until after the workshops and start meeting for an hour or so once a week for 10-12 weeks.

A Note About the Competition

The Nature Bowl strives to de-emphasize the competitive nature of the event. **It is our intent to maximize learning, cooperation and self-esteem.**

At the awards ceremony, where all students and teams receive the same prizes, each team is called up in random order, and their strengths are announced and praised. Actual point tallies and placement of teams are not given. After introducing all the teams, the top scoring teams advancing to the finals are recognized. Coaches can privately request more detailed feedback from the judges.

Judges ask that all coaches refrain from challenging the questions and answers during a round. At the end of the round, coaches can ask questions or voice a concern.

TEAM PREPARATION

Here is a suggested timeline for preparing your team:

JANUARY (3-4 meetings)

- Provide overview of Nature Bowl
- Focus on learning glossary words and increasing observation skills
- Make flashcards, have team members come up with examples
- Set up an un-nature trail or a nature scavenger hunt
- Try activities in Nature Bowl Brochure
- Pick an animal or plant - What's its adaptation?
- Key concepts-habitat, microhabitat, niche

FEBRUARY (3-4 meetings)

- Decide and start enviro-mercials; talk about local issues
- Teach phone etiquette for interviewing experts, share resources
- Discuss food chains, life cycles, water cycle
- Identify food chains from different habitats, especially oak woodlands, rivers, wetlands, conifer forest and chaparral.
- Practice bell ringers/team problems
- Play charades with environmental concepts from glossary

- Practice teamwork
- List examples to illustrate flashcard vocabulary
- What can you tell from a skull, a track?

MARCH (3-4 meetings)

- Discuss native/non-native plants and animals
- What are conservation and preservation?
- Apply what you've studied on a field trip to your semifinal site, or zoo.
- Finish enviro-mercials and practice, practice, practice!
- Practice nature investigations by going for a walk at the park or school ground.
- Find an animal sign, stage of a life cycle, and non-native plant
- Practice nature relay
- Practice teamwork

APRIL

- Semi-final competition at your site
- Talk to classmates about Nature Bowl experience
- Put an article in your school newsletter about the competition and list team members
- Prepare for finals; review concepts, practice enviro-mercials (students add action to their topic)

MAY -Finals

SAMPLE QUESTIONS FOR SEMI-FINALS



OUTDOOR INVESTIGATION ROUND

Each team is given a set of 5-7 questions to answer through investigation in the out-of-doors. Each question will have a time limit. Coaches may not accompany their own teams but may quietly follow and observe another team. Students will be accompanied by a monitor who will read the questions and write down the answer the students offer. For this activity, a team is 3 children.

SAMPLE OUTDOOR INVESTIGATIONS QUESTIONS- 3RD / 4TH

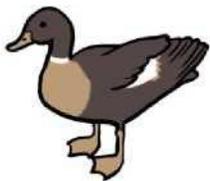
1. Identify the objects in these touchy-feely boxes and answer the following questions:
 Leave items in box. (2 minutes)
 A - In what habitat would you find this? (river rock)
 B - How is this formed? (gall)
 C - What is the function of this item? (feather)

2. What are two things you can tell about the animal that made this track? (90 seconds)
3. Search the trail and list the objects that would not naturally be found there. (The trail will be identified by the staff.) 20-25 items. (3 / minutes)
4. Here is a tray of 15 items. You have 1 minute to study it. Now I will cover the tray. How many items can you list? (90 seconds)
5. We will give your team pictures of five animals. Each of these animals has ways to avoid predators. Match the predator's name on the left of your answer sheet with the defensive tactic it uses on the right.

SAMPLE OUTDOOR INVESTIGATION QUESTIONS 5TH/6TH

1. Look at the skull and list three things the skull tells you about the animal. (90 seconds)
2. Search the trail and list the objects that would NOT naturally be found there. (The trail will be identified by the staff.) 20-25 items. (3 minutes)
3. Using a tree key, determine the name of this tree using this branch of leaves. (2 minutes)
4. Identify the niche or job of three creepy crawlies found in this soil sample. (90 seconds)
5. Locate a deciduous tree. What's the advantage of being deciduous? (90 seconds)
6. One at a time, students are blindfolded. Each is led on a circuitous route to a tree. The blindfolded student should study the tree for about 20 seconds (touch, smell, measure) and then be led back to the starting point. Student then locates his/her tree without the blindfold.

NATURE RELAY ROUND



Three teams will line-up across from three snow saucers. The monitor will call out a word or term. One member from each team will run to the saucer and search the items to find the one that most closely relates to the word or phrase. For example, if the team members were asked to find a "producer", they would look for a green plant on the snow saucer, pick up the item and run back to the line. The monitor looks at each item retrieved and if correct the team gets a point. Team members then return the item to the saucer.

NATURE RELAY SAMPLE ITEMS

Word or phrase is what the monitor would say - item in () is what would be on the saucer.

3rd/4th GRADE

- Amphibian (frog puppet)
- Decomposer (fungus)
- Nocturnal mammal (bat)
- Migration (toy salmon)
- Seed (pinecone)
- Herbivore (mouse picture)
- Metamorphosis (butterfly)
- Pollution (oil can)
- Marsh plant (cattail)
- Aquatic Animal (fish picture)
- Predator (rubber snake)

5th/6th GRADE

- Lichen (lichen)
- Invertebrate (spider)
- Feral (toy cat)
- Commensalism (gall)
- Raptor (hawk talon)
- Exotic (opossum)
- Terrestrial mammal (deer antler)
- Riverine (smooth rock)
- Coniferous (pinecone)
- Renewable (water bottle)
- Spawning (toy salmon)

TEAM PROBLEMS ROUND

Each team will be asked a series of 5-7 questions. Team members should quietly discuss their answer. One person on the team will write down the team's answer on the answer sheet provided. Answers do not have to be in complete sentences. A single word, phrase or diagram that shows the team knows the answer is adequate. For this activity, a team is 3 children.

SAMPLE TEAM PROBLEMS 3rd-4th GRADE

1. Using four of the animal puppets in front of you, make a food chain that might be found in our region (Delta to Sierras). In what habitat would the food chain occur? (60 seconds)
2. Choose one of the animals listed on the blue card in front of you. Write the word on your answer sheet. Act it out as a *team* for the other team to guess. You will have 60 seconds to prepare and 30 seconds to act out the word you selected. You may not use oral sound effects. The other teams will have 30 seconds to write down their answer. Each team receives points when they correctly guess or when their acting is correctly guessed.

3. In the basket are several lunch items and lunch containers. Which would you choose to have a no-waste lunch? (1 minute)
4. The seeds of different plants are spread in different ways. You each have four different kinds of seeds in front of you. Tell us how each seed is spread around. What is one other way that seeds of many plants are scattered? (1.5 minutes)

SAMPLE TEAM PROBLEMS 5th-6th GRADE

1. Choose one of the three concepts listed on the blue card in front of you. Write the word on your answer sheet. Act it out *as a team* for the other teams to guess. You will have 60 seconds to prepare and 30 seconds to act out the word you selected. You may not use oral sound effects. The other teams will have 30 seconds to write down their answer. Each team receives points when they correctly guess or when the concept they acted out is correctly guessed.
2. Select an animal/puppet and construct a five-part food chain appropriate for the animal. (90 seconds)
3. Name three types of wetlands found in California, three values of wetlands to people, and three human threats to wetlands. (75 seconds)
4. Match each seed with the main way it is dispersed in nature. (60 seconds)
5. On the map, follow the flow of a major river from its origin to its drainage into the Delta. (90 seconds)
6. Match the animals with the term that most accurately describes their current population status. (i.e., opossum=exotic; skunk=ative) (60 seconds)

BELL RINGERS ROUND

Each team will be given a bell. We will ask a question. The team that rings the bell first is given the opportunity to answer the question. Teams will not be allowed to discuss the question or their answer before or after ringing; no discussion is permitted. The student who rings the bell will be the one to answer. If the first student answers incorrectly, the remaining students still have a chance to answer.



After ringing in, the judges will call on the first team that rang and the individual who rang the bell must answer. The student will have three seconds to start to answer. If the answer is incorrect, judges look to the second team to ring in. The individual who rang the bell has the opportunity to answer. If this answer is incorrect, or another team did not ring in, the question will be read again. For this activity, a team is 3 children.

SAMPLE BELL RINGER QUESTIONS 3rd-4th GRADE

1. Name two reasons animals migrate. (climate, food, shelter)
2. Name one animal that migrates through the Sacramento Valley. (Geese, Sandhill Cranes, Geese, King Salmon, Monarch Butterfly)
3. Habitat provides space and clean water for wildlife. What are two other things it provides? (food, shelter)
4. Name two of the mountain ranges that border the Central Valley. (Sierra Nevada, Coast Range)
5. Name a reason to conserve our natural resources.
6. I will read a series of clues. As soon as you think you know what kind of animal I am, ring the bell. If you are wrong, I will continue for the other participants.
7. Name an adaptation of a grassland animal.
8. Name the California state flower.

SAMPLE BELL RINGER QUESTIONS 5th-6th GRADE

1. What is a biologist? (see glossary)
2. Name two energy sources that are renewable. (solar, wind, geothermal, gas-methane-from digesting garbage and other organic material, hydro)
3. I will read a series of clues. As soon as you think you know what kind of animal I am, ring the bell. If incorrect, I will continue reading.
4. What is the major cause of air pollution in the Sacramento Valley? (automobiles)
5. Name two benefits and two problems related to dams. (recreation, power irrigation; disrupts natural migrations, prevents sediment flow, floods habitat)
6. Two parts: name an endangered or threatened species in the Delta, Sacramento Valley or foothill region; and name one of the main reasons it is endangered.
7. What are two functions of feathers? (flight, warmth, camouflage)
8. While habitat loss is the most serious threat to native plants and animals, there are other major threats. Identify another threat to our native plants and animals. (pollution, poaching, invasive species, competition)



ENVIRO-MERCIALS (Environmental Commercial) ROUND

THE ASSIGNMENT

Three students from your team are to identify local environmental issues affecting their communities and issues to research and report on. The subjects will vary with each student. Three students from each team will present **individual** presentations on separate topics. For example, Avery from Green Lawn Elementary might present her

enviro-mercial on the problem of feral cats. Jose from Green Lawn Elementary might present his enviro-mercial on lunch waste at school. Rahul from Green Lawn Elementary might present his enviro-mercial on how rodenticides are affecting his neighborhood. All three are members of the Green Lawn Elementary team, but they are each presenting a separate 60 second commercial.

Some coaches have each student prepare an enviro-mercial and then let the team choose which three will represent them. Each commercial message should be 60 seconds in length. Each commercial should:

1. Describe the issue, its cause(s) and effects. Be specific.
2. Describe what, if anything, is being done or about the issue **in your community**.
3. Suggest a practical solution that the student thinks would help correct the issue. This could be a solution the student invents or information on current efforts could be defended.
4. We strongly encourage students to **gain first-hand information** by visiting a site, interviewing people, attending a meeting and/or being part of a solution.
5. We highly recommend that students **narrow their topics** and focus on one **local or regional topic or aspect of the topic**. Possibilities of interest might be local air quality; vernal pool or riparian habitat loss; local recycling oil or plastics; use of bottled water, or smart consumer choices when buying food, or other products. Contact your local environmental groups for other ideas.



GROUND RULES FOR ENVIRO-MERCIALS

1. Three members from each team will give individual presentations. Each individual's presentation must be unique. (No team presentations allowed). The commercial should focus on a local/regional issue.
2. A **3" x 5" file card** listing the sources of information must be submitted to the judges.
 - **3rd/4th grade students** need to list **at least three sources**;
 - **5th/6th grade students** need to list **at least five sources**.
 - At least one source should be from the community (a person or agency knowledgeable about the problem). Use up-to-date sources.

- The URL of any website used must be listed. A variety of kinds of sources is preferred over websites alone.
3. Notes may be made on the rest of the card. Only **ONE** file card may be used for the presentation. Students do not need to memorize their presentation.
 4. A visual aid may be used during the presentation. The use of a visual aid is not required. *If used, the visual aid must be of a size that the student can bring into the room easily in one trip.* Judges prefer students' homemade props over props designed or made by adults. Some students have created poems, raps and songs; others have personified one or multiple roles. No computers/projectors, please.
 5. The judges will ask a question(s) about the presentation.

JUDGING CRITERIA:

Choice of Topic: is it relevant, is it regional or local, is it important, why did student choose it?

Thoroughness: Covers problem, impacts, solutions, solutions, depth of research, more than one example.

Creativity: artistry, creative angle or approach, work was completed by student without adult help.

Resources: diverse, credible, mostly local or regionalized, includes different perspectives, exceeds minimum of 3 for 3rd/4th and 5 for 5th/6th

Response to Questions: demonstrates strong comprehension of material

Overall Impact: communication abilities, grasp of subject, persuasiveness, energy/enthusiasm, took appropriate action to reduce problem (direct or indirect.)

Time: Did not go over time limit.

How we determine scores: the judges scores are averaged, then the average for each student is added to reach a team score.

