BioS.I.T.E Kit Materials Card

Habitat Battleship

30 laminated grid folders

15 instruction/macro ID packets (1 per team)

30 washable markers

15 cleaning rags

30 macro tile packets

STEP additional resource packet

Habitat Battleship

Adapted from STEP Curriculum

Guiding Questions

Ask students if they are familiar with the word ***habitat*** (the space that a plant or animal lives in, including the food it eats and the shelter it needs to survive). Ask students to come up with examples by naming an animal and its habitat (i.e. mice live in fields, lions in the jungle, a lizard in the desert.) Ask students how specific a habitat can be, and discuss different examples.

Have students imagine that they are taking a walk along a river, whether it's one you've recently visited or one or imagining one you are preparing to go to. Ask students if a river looks exactly the same no matter what part you are in, or if different areas have different features, like the size of rocks, abundance of trees or shade, amount of water and how fast it flows.

Explain that there are several types of habitats within a single stream. There may be ***pools*** which are deeper, slower moving sections, and there may be ***riffles***, which are swift and shallow and may even have protruding rocks where the river flows quickly, creating white water. Explain that each of these types of habitats supports a different community of animals whose physical traits are adapted to best live in that environment. Explain that since these adaptations are specific to each species, each animal has its own ***niche***, and fills a different role in its community.

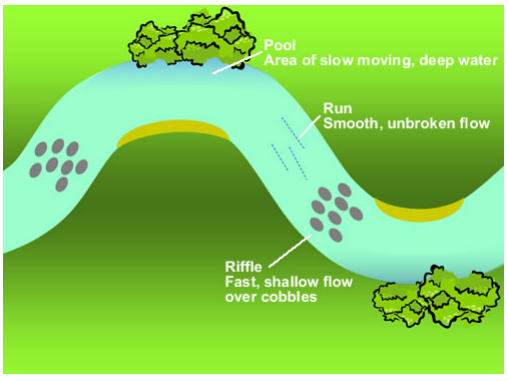
Content

Living things have physical characteristics that allow them to survive. They use these characteristics to meet their basic needs for food, water, oxygen, protection, shelter, and reproduction. Knowing what animals do to survive allows us to make predictions about their characteristics. Some animals are alike in the way they look and the things they do, while others are very different from one another. The function or use of some physical characteristic is usually related to its shape.

Habitat-The space an organism inhabits and its physical characteristics, like food and shelter. ***Niche-*** The organism's functional role in its surroundings; everything that affects the organism and everything that is affected by it.

Pools- Deeper, slower moving sections with a smooth surface and a silty bottom.

Riffles- Shallow, swift moving areas with broken surfaces and rocky bottoms.



Habitat Battleship

Adapted from STEP curriculum

Students will play a game based on the classic game of Battleship. In Habitat Battleship, students sitting across from each other place stream critters on a game board that represents the stream. The opposition tries to locate the others' critters based on information they know about it's habitat.. The purpose is for students to understand that different organisms occupy different niches in the stream because of their unique adaptations.

1) Pass out the following

<u>To each student:</u> laminated grid folder, washable marker, critter tile packet
<u>To each team:</u> instruction/macro ID packet, cleaning rag

2) Have each student open folder and locate the organism ID/adaptation packet, Hit Chart, and critter tile packet.

3) Each student should empty their critter tile packet onto their hit chart and match each tile to verify a complete set (or as complete as needed).

4) Students pair off and set up opposing game boards, back to back, with paper clips. *Note:* Make sure grid reads with A on left and 1's at the top.

5) Depending on age of students, check for understanding of current direction, riffle, and pool areas on board. *Note:* Stream flows from I to A, so if needed, define by letters; A-D=pool, F-I=riffle and E=transition. You can also use diagram clues such as black lines, gravel size and leaf matter.

6) Walk through basic play with whole class. Teacher acts as moderator/judge for challenge disputes, not resolved by students using packets.

<u>Scoring:</u> Person to score the most points wins!

***Basic:* 1 point for a hit; additional 1 point if player can identify organism.**
***Advanced:* If player CAN identify, add 1 point for naming an adaptation of organism. If play CANNOT identify, then opposing team (the 'hit' player) must identify organism.**
***Challenges:* A player or team can declare a 'challenge' if they disagree with placement of organism by opponent because they think it has been placed in the wrong habitat.**
If challenge *successful* (opponent in wrong habitat), 3 points to challenger. If challenge *unsuccessful* (opponent in correct habitat), 6 points to opposing 'challenged' team/player.