Name: _____ Date: _____

# The Archerfish That Shoots Down Its Dinner

Circle group

Many fish wait for food to fall into the water. The archerfish does not wait. It lives in swamps and shallow seas in Southeast Asia and northern Australia. It hunts by shooting water at insects. The insects sit on leaves and branches above the water.

The fish makes a tube with its tongue and a groove in its mouth. Then it squeezes its gill covers. A fast stream of water shoots out. The water hits the insect and knocks it off its leaf. The fish snaps it up fast.

Aiming is hard. Light bends when it goes from water into air. So the insect looks like it is in a different place. The fish looks up from below, but it still hits the mark. Young fish get better with practice.

Many fish share the swamp and compete for food. Few can reach insects above the water. The archerfish can. It gets a meal that the other fish cannot reach.

## Questions

**1. Where does the archerfish live?**

_____

_____

**2. How does the fish make a jet of water?**

_____

_____

**3. What does the fish do after the insect falls?**

_____

_____

**4. Why does an insect look like it is in a different place?**

_____

_____

**5. Why do young archerfish need practice?**

_____

_____

**6. How does hunting above the water help the archerfish?**

_____

_____

## Words to know

groove: a long, narrow channel cut into a surface

## Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

# The Archerfish That Shoots Down Its Dinner

Triangle group

Plenty of fish that eat insects simply wait for a meal to drop into the water. This species is far more ambitious. It lives in the mangrove swamps and shallow coastal waters of Southeast Asia and northern Australia, and it hunts by shooting a jet of water at insects resting on leaves and branches above the surface.

The weapon is simple but clever. A groove runs along the roof of the fish's mouth, and when the tongue lifts to meet it, a narrow tube forms. Next the gill covers clamp shut, and water rushes through the tube in a fast, powerful stream. A well-aimed jet knocks the insect off its perch, and the fish snaps it up before another hungry animal can.

Aiming is harder than it sounds. When light crosses the boundary between water and air, it bends, so an insect appears to sit in a slightly different place than it really does. An archerfish looks at its prey from below, yet it still hits the mark. Experiments suggest that young fish improve with practice, gradually learning how to correct for the bending of light.

The habit pays off in a crowded habitat. Many kinds of fish compete for food in mangrove waters, but few can reach prey that sits above the waterline. By turning the air into a hunting ground, the archerfish gains a meal that its neighbors cannot touch.

## Questions

**1. Where does the archerfish live?**

_____

_____

**2. How does an archerfish make a jet of water?**

_____

_____

**3. What does the fish do after the insect is knocked off its perch?**

_____

_____

**4. Why does an insect seem to sit in a different place than it really does?**

_____

_____

**5. Why does the passage say young archerfish need practice?**

_____

_____

**6. How does hunting above the water help the archerfish in a crowded habitat?**

_____

_____

## Words to know

mangrove: a tree that grows in salty water along tropical coasts
ambitious: trying to do something difficult or bold
groove: a long, narrow channel cut into a surface
habitat: the place where an animal naturally lives
prey: an animal that is hunted for food

## Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

# The Archerfish That Shoots Down Its Dinner

Square group

Most insect-eating fish are content to wait until a meal happens to drop into the water, but the archerfish is far more ambitious. It inhabits the mangrove swamps and shallow coastal waters of Southeast Asia and northern Australia, where it hunts by firing a jet of water at insects that are resting on the leaves and branches above the surface.

The weapon is as simple as it is clever. By pressing its tongue against a groove in the roof of its mouth, the fish forms a narrow tube, and by squeezing its gill covers together it forces water through that tube in a fast, powerful stream. A well-aimed jet knocks the insect from its perch, and the fish snaps it up before any other hungry animal has a chance.

Aiming is considerably harder than it sounds. Light bends as it passes from water into air, so an insect appears to sit in a slightly different position than it truly occupies. Although the archerfish views its prey from below, it still hits the mark. Experiments suggest that young fish improve with practice, gradually learning how to correct for the bending of light.

This habit pays off handsomely in a crowded habitat. Countless kinds of fish compete for food in mangrove waters, yet very few can reach prey sitting above the waterline. By turning the air into a hunting ground, the archerfish secures a meal that its neighbors cannot touch.

## Questions

**1. In which regions does the archerfish live?**

_____

_____

**2. How does an archerfish produce a powerful jet of water?**

_____

_____

**3. What does the fish do once the insect has been knocked from its perch?**

_____

_____

**4. Why does an insect appear to sit in a different position than it really does?**

_____

_____

**5. Why would young archerfish need to practice aiming?**

_____

_____

**6. How does hunting above the water give the archerfish an advantage in a crowded habitat?**

_____

_____

## Words to know

mangrove: a tree that grows in salty water along tropical coasts
ambitious: trying to do something difficult or bold
groove: a long, narrow channel cut into a surface
habitat: the place where an animal naturally lives
prey: an animal that is hunted for food

## Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

# For the teacher: The Archerfish That Shoots Down Its Dinner

Each student sheet carries a shape, not a level. The same topic and facts, written three ways.

### Circle: The Archerfish That Shoots Down Its Dinner

Easier · 159 words · Flesch-Kincaid grade 2.7

1. In swamps and shallow seas in Southeast Asia and northern Australia.
2. It makes a tube with its tongue and mouth, then squeezes its gill covers.
3. It snaps it up fast.
4. Light bends when it goes from water into air.
5. Aiming is hard because light bends, so they must learn to fix for it.
6. It gets food that other fish cannot reach.

### Triangle: The Archerfish That Shoots Down Its Dinner

This passage · 233 words · Flesch-Kincaid grade 7.3

1. In mangrove swamps and shallow coastal waters of Southeast Asia and northern Australia.
2. It forms a tube with its tongue and a groove in its mouth, then squeezes its gill covers.
3. It snaps up the insect before another animal can.
4. Light bends as it passes from water into air.
5. Aiming is hard because of the bending light, and they must learn to correct for it.
6. It reaches food that most of the other fish cannot get, so there is less competition.

### Square: The Archerfish That Shoots Down Its Dinner

Harder · 240 words · Flesch-Kincaid grade 9.5

1. In the mangrove swamps and coastal waters of Southeast Asia and northern Australia.
2. It forms a tube with its tongue and a groove in its mouth, then squeezes its gill covers together.
3. It snaps the insect up before another animal can take it.
4. Light bends as it passes from water into air.
5. Because of the bending light, they must gradually learn to correct for where the insect really is.
6. It reaches food that most competing fish cannot get, so it faces less competition.