Help Wanted!



By figuring out Ruff's problem and hiring a scientist to help, kids learn about different types of scientists and the work they do. Along the way, they have fun and see science as an adventure!

when to Play

Play this game as a 50-minute stand-alone activity, or at any point during a FETCH! Club meeting. Lead the game as often as you'd like with different groups of kids. This guide provides game pieces for two sessions. If you plan on playing the game more often, you may choose to laminate a complete set of game pieces or download more pieces at the Parents & Teachers page at pbskidsgo.org/fetch.

Setting up the game

- Photocopy the game board, one per team of two.
- Photocopy Ruff's 12 problems. Cut them out and put in a container.
- Cut out one set of scientists (12 game pieces) and one set of equipment (72 game pieces). Familiarize yourself with them.
- Lay the game pieces out in two areas—scientists in one, equipment in another.
- Determine the group point total. Every team's efforts will count toward the group's goal. To come up with a group total, multiply the number of teams by 50. (Each individual team has the potential to earn 60 points, but setting the goal at 50 points will reasonably ensure that they attain it.) For example, 10 teams x 50 points = 500 total group points. Keep track of points on a chart, chalkboard, or scrap paper.
- Optional: collect books on science careers to display and plan a reward.

Leading the same

Read the introduction at the top of "How to Play" (p.31) to your group, and lead them through the steps. Announce what the group point total will be (see "Setting up the Game"), emphasizing that reaching the group total is the ultimate goal of the game. Below are a few additional tips on each step.

- **Figure out Ruff's Problem.** (10 minutes) Go around the room as kids read their problems, in case they need help understanding particular words.
- Hire a scientist to help. (5 minutes) Make sure kids choose the right scientist—see the answer key on page 30. To steer them in the right direction, ask: "What's going on in this problem? What does this scientist explore? What words tell you that you should hire this scientist?"
- **Pick UP equipment.** (15 minutes) Encourage trading if you notice a team with equipment that's more appropriate for another team's scientist. Some equipment applies to many scientists; other equipment is specific to a particular type of scientist.

If some teams finish early, have them select another problem and complete a second game board. Award bonus points if you wish.

materials

- Pencils (one per kid)
- Transparent tape (one roll per team)
- Container to hold Ruff's problems
- Game board (one master copy included), p. 32
- Set of Ruff's problems (one master copy included), pp. 33–34
- Set of scientists (two sets of 12 are included; enough to play twice),
 p. 35
- Set of equipment (two sets of 72 are included; enough to play twice), pp. 37–44
- Answer key, p. 30

Optional:

- Chart paper
- Books about science careers (see p. 51 for recommendations)
- Reward (stickers, treat, etc.)

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Rack UP Some Points! (20 minutes) Gather as a group. Read each team's problem aloud, and ask them to talk about which scientist they hired, what equipment they selected, and how their scientist would use it. If you're running out of time, have each team talk about one piece of equipment and how it would be used.

Award points as you move from team to team. (The answer key provides some guidelines, if you're not sure about a piece of equipment). Award points for each reasonable answer. Then determine if the group met the overall point goal.

Optional: Show kids a display of books about careers in science.

Answer key

The table below lists Ruff's problems (identified by letter) and the corresponding scientist who can help. The table also lists equipment that's specific to each scientist. The general equipment listed at right can be used by several different scientists (e.g., microsopes, dissecting kits, and nets). Use your judgment to determine whether a team's choices of equipment are appropriate for each scientist—kids may make a compelling case for equipment not linked to their scientist.

Problem	scientist	Specific Equipment	animal tracking device	barometer	biohazard suit	crowbar	diving gear	dynamite	field guide to insects	field guide to fossils	field guide to mammals	field guide to marine life	field guide to plants	field guide to rocks and minerals	heat-resistant gloves	Hubble space telescope	insect aspirator	lightning detector	mineral test kit	night vision goggles	plant press	rain gauge	respirator	rock pick	seismograph	shears	sky map	submarine	telescope	terrarium	toothbrush	tranquilizer darts	trap	underwater camera	water test kit	weather balloon	weather map	weather station
A	Volcanologist				٠									٠	٠				٠				٠		٠													
В	Botanist												•								٠					٠				٠								
C	Meteorologist			٠														٠				٠														٠	•	•
D	Seismologist																								•													
E	Paleontologist					٠		٠		٠														٠							٠							
F	Astronomer															•											•		٠									
G	Geologist					•		٠		•				٠					٠				٠	٠							٠							
н	Environmental Scientist		٠		•						٠	•	•									•				٠		•						•	•			
I	Marine Biologist		٠				٠				٠																	•				•		•	•			
J	Wildlife Biologist		٠						٠		٠		•							•												•	٠					
K	Chemist				•										٠								•															
L	Entomologist								•								•													•								

General equipment

The following can be used by a variety of scientists:

aquatic net binoculars

• climbing rope

dissecting kit

• camera

computer

• flashlight

• forceps

• funnel

• harness

headlamp

• helicopter

• helmet

• GPS

outdoor gear

• hiking boots

- paper and pen
- magnifying glass
- microscope
- net
- safety goggles
- shovel
- specimen containers
- test tubes
- thermometer
- waders

Help Wantedl

Ruff Ruffman has a knack for getting into trouble and he needs your help! Find out what the problem is and hire a scientist to help Ruff. Then, pick up some equipment to explore Ruff's predicament.

Players: Up to 24, divided into teams of two **Playing Time:** 50 minutes **Goal:** Choose the right scientist and equipment

to help Ruff, and rack up points!

Get What You need

- •Game board (one per team of two)
- Game pieces (one set of problems, scientists, and equipment for the entire group)
- Tape (one roll per team)
- Pencils (one per kid)

Figure out Ruff's problem

- Get into teams of two and pick up a game board.
- Choose one of Ruff's problems, and discuss it with your partner.
- Tape it to your game board.

2 Hire a scientist to help

- Look at the list of scientists on the game board and read about the kind of work they do. Which one can help with Ruff's problem? (Only ONE scientist on the list will be able to help.)
- Choose a scientist to hire, and tape the game piece to your board.

B Pick up equipment

- Select four pieces of equipment to help the scientist explore Ruff's problem. Some equipment is for a specific scientist (for example, only an astronomer would use a telescope). Other equipment can be used by lots of scientists (many scientists, for example, use computers). You can choose both types of equipment.
- Tape the equipment game pieces to your board.
- Write down how the scientist would use each piece of equipment on the lines below.

🕑 Rack up some points!

Gather as a group. Have the game leader read Ruff's problem aloud from each game board. Then each team will tell the group what scientist it hired, what equipment it chose, and how the scientist would use it.

Add up your points:

- 20 points for picking the correct scientist
- 10 points for each piece of equipment—as long as you've explained how you'll use the equipment
- Did your group meet its overall point goal? (50 points x number of teams = group goal)





How to play