

**Grades: 4-5**

## **SciGirls, “Awesome Athletes”**

SciGirls in San Diego go for the gold! Clarissa and her sporty pals get inspired by Olympic athletes. They team up with a sports medicine physician and create a fitness boot camp to promote community health.

**After watching this episode, choose from the following questions and/or tasks to extend your learning**

### **Question Box 1**

- What sport is each of the SciGirls training for?
- The SciGirls visit an Olympic training camp, what do they learn from the athletes there?
- What does this visit to the Olympic training camp inspire the SciGirls to do?
- What are some reasons that athletes seek help from sports doctors?
- What does each girl learn from the sports doctor as it pertains to the sport each is training for?
- What type of exercise is recommended for each girl and why?
- What do the girls plan to do after visiting the sports doctor?
- What type of exercise is each girl planning to research?
- How long do the girls think is a good length of time for a workout and why? What other responsibilities do the girls have to consider?
- What are the goals for their workout? Why do the girls feel it is important to include games in their workout plan? Do you agree or not and why?

### **Question Box 2**

- What did you learn from the program?
- What resources will you need to learn more about this topic?
- Where did you encounter struggles understanding the topic? How did you deal with it?
- Why is research important?
- How do the girls resolve conflict? How do you resolve conflict?
- How are the girls' families supportive of their goals? How is your family supportive of your goals?
- Why is it important to set goals?

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### **Box 3 (Tasks)**

- Think like an athlete trainer: Research and design a workout plan. Justify the activities you chose.
- Make dice similar to the girls: one die for time variation and the other for the activity.
- Lead your family through your workout plan.
- Create a bar graph that shows the type of activity and the length in minutes that should be completed in one week. Where is the most amount of time spent? The least? Why is that? Are there other factors that encourage longer amounts of time or shorter amounts of time? Justify your reasoning using mathematics.
- Diet is an important part of training. What is the recommended caloric intake for a female athlete between the ages of 14-18? How would you distribute the calories throughout the day? Are three meals/day better than four meals/day? Justify your reasoning.

### **Box 4 (Enrichment)**

- Healthy snacks are important for athletes to keep up their strength and stay hydrated.
- Find a healthy recipe. Gather all the ingredients. Use the correct measuring to make your healthy snack. Share with others.
- Exercise is one healthy choice we can make for ourselves. Make a list of other things you can do that are good for you both mentally and physically.

### **Box 5 (Extend/Real-Life)**

- Sports medicine professionals have special training to restore function to injured patients so they can get moving again. They are also knowledgeable about preventing illness and injury in active people. Balance is not directly related to muscle health, but it is important to your overall physical well-being, balance helps you to avoid injury and improve coordination. When the brain can't get some information from the body it is harder to maintain balance. Design an experiment to determine what type of information (touch, sight, inner ear) affects your balance the most. Brainstorm a list of how you can alter touch, sight, and inner ear information. Make sure the list includes some of these items: stand on one foot walk on a simulated balance beam (put two lines of tape on the floor 6 in. apart); stand with one foot on the ground and another resting on a ball or short stool; stand on a pillow, couch cushion, or thick blanket; stand on your tiptoes blindfold or close your eyes; turn off the lights; close one eye; or spin around multiple times quickly (looking up, down, or straight ahead).
- Work with a partner. Choose one variable to test at a time and record your results in a table. Run multiple trials testing the same person each time. Calculate the average of the results from the trials for each variable and compare them.
- How did changing different variables affect balance? Were there some variables that didn't make a difference? Which variable(s) affected balance the most?
- Who would benefit most from knowing what affects balance? How would you work on improving your balance?