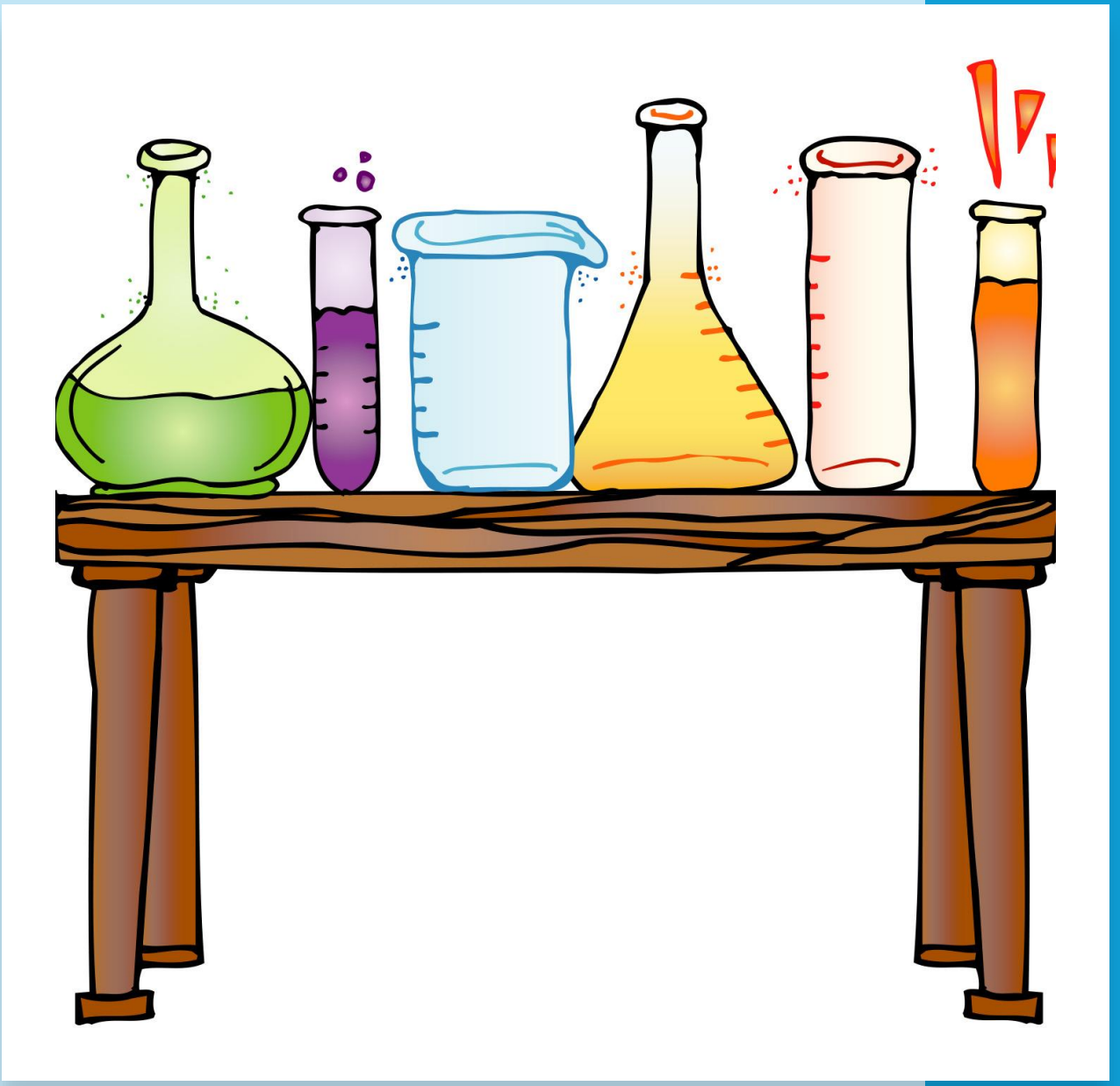
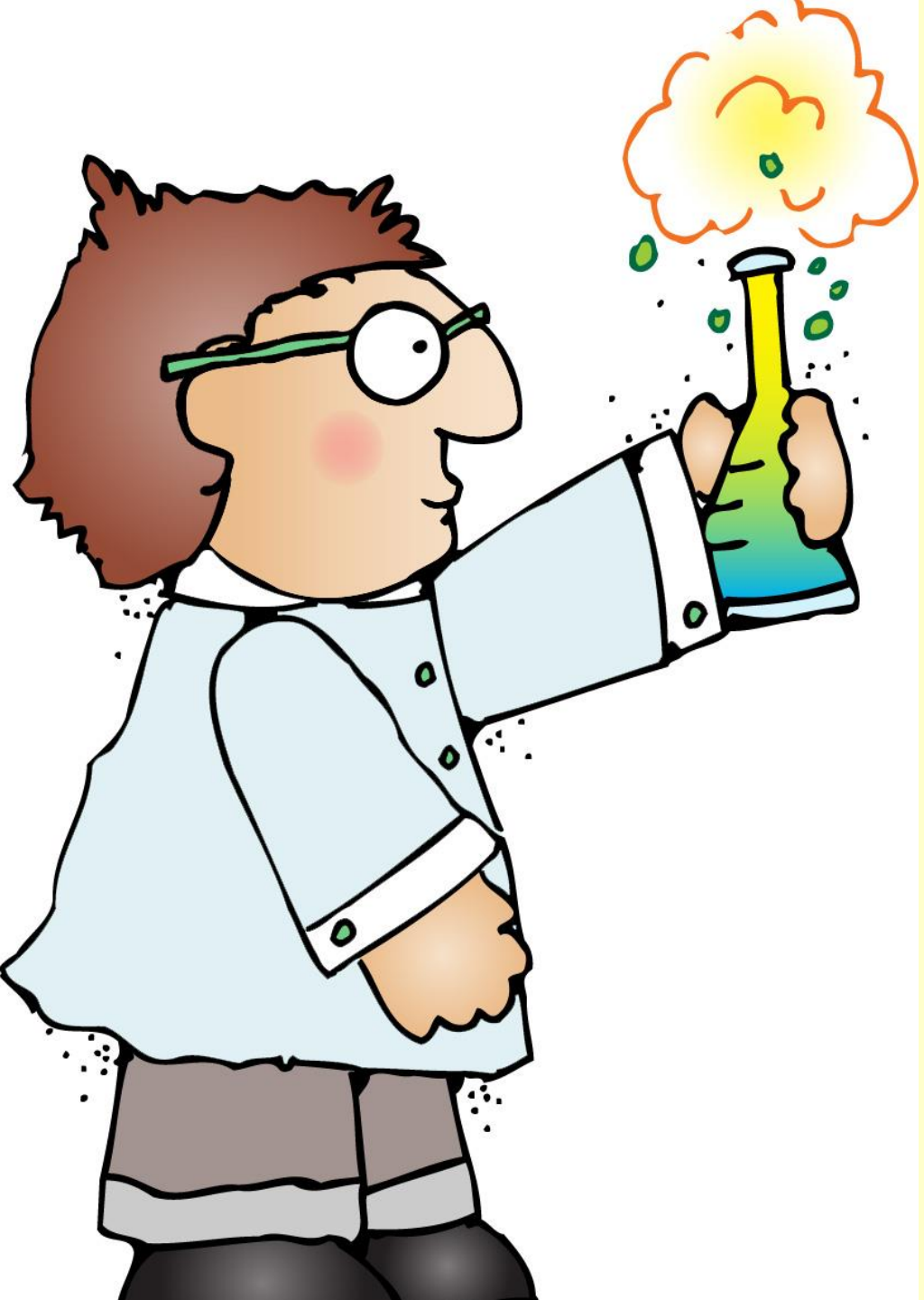
Achieving Success in Science

Fostering Self-Management
Grades 1-5

ECS Learning Systems

- To achieve real success in science, students must be actively involved in their learning.
- Mere memorization of words, facts, and formulas does not develop the kind of scientific literacy that students need—and deserve— for the world they live in.
- Self-management is an important part of active learning.





Self-management includes the following:

Self-monitoring:

Students should know how to tap into what they already know about a topic or a concept.

Self-regulation:

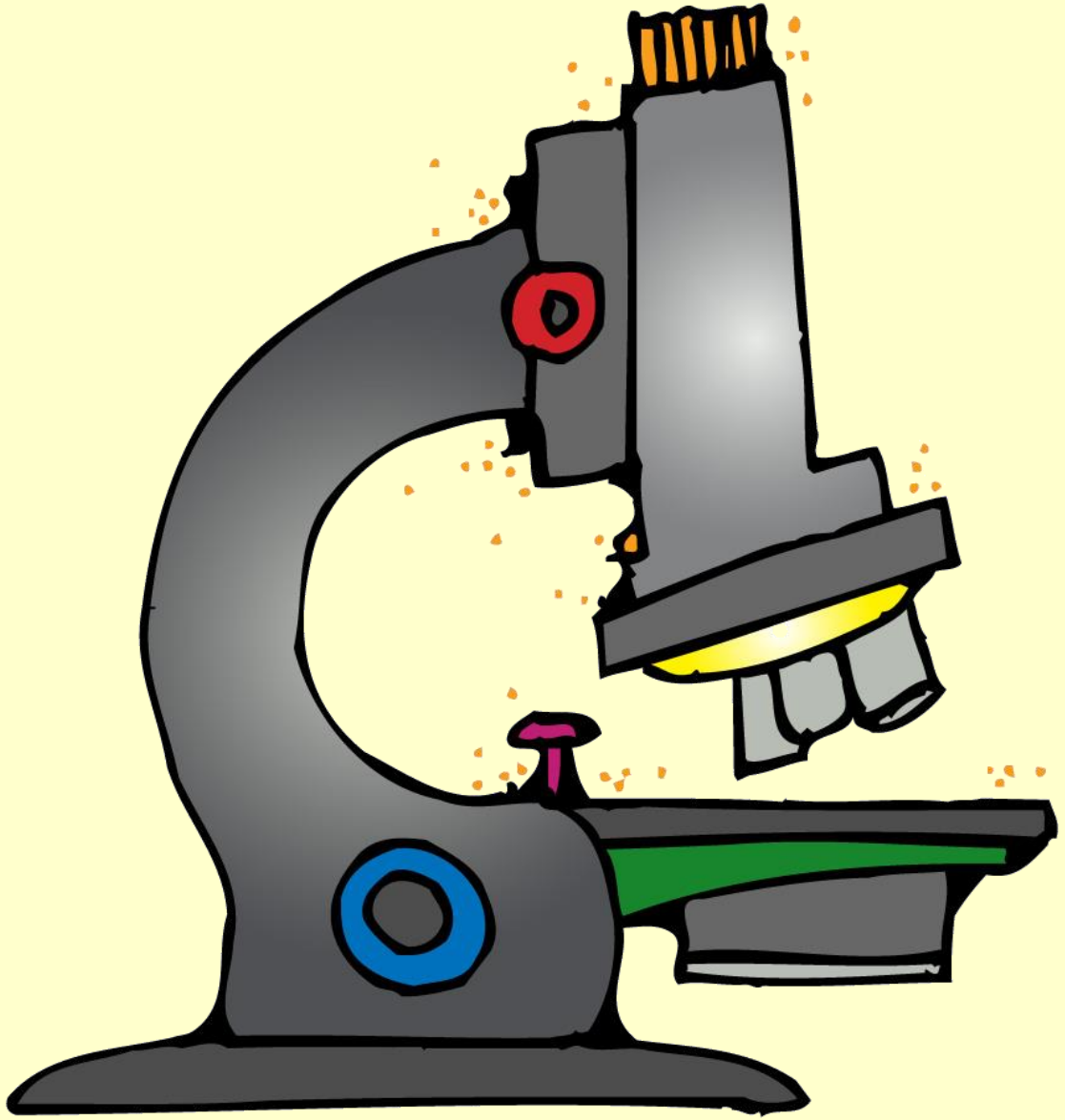
Successful students recognize when a process or approach is not leading them in the right direction toward a correct answer.

Self-assessment:

Students who know how to evaluate both their problem-solving strategies and the results of their work have a greater chance of success in science.

How families foster this kind of self-management for their student?

- Effective questioning strategies provide one way to encourage students.
- Families can model the kinds of questions that students should be asking themselves as they engage in learning.



Some examples of such self-monitoring questions appear below.

What am I supposed to know or discover about _____?	What do I already know about __?	What can I do with what I already know?	Could there be more than one right answer or solution?	Is any important information missing? If so, what is it?
Have I read or learned about similar concepts or ideas in the past?	What problem-solving strategies do I know?	Which problem-solving strategies might help me with this task?	What have I learned about _____?	How well do I understand __ now?
	Was my problem-solving strategy successful? Why or why not?	What could I have done differently?	What else would I like to know about _____?	

Families can also lead their student toward greater self-management with questions like these:

Probing questions:

- How did you begin your study of_____?

Clarification questions:

- What did you mean when you said/wrote _____?
- Could you give an example of _____?

Elaboration questions:

- What information did you use to _____?
- What else can you tell me about _____?

Redirection questions:

- What could you have done differently if your first attempt was not successful?
- Have you thought about trying ___?

STAAR MASTER®

Content in part from STAAR MASTER®
Student Practice Book
Science Teacher Guide.

ECS Learning Systems