

Notes: What are the characteristics of a scientific thinker?

We used a problem with our class fish tank to discuss how a scientist thinks and explores problems in our world. Our ideas are listed below.

What are the characteristics of a scientific thinker?

Fish tank that turned brown: *different food-spoiled-heating effect, too much food (students), algae feds on food+light, different plants more lights, filter might be stuck-jammed,*

Get a water reading to see if you have high ammonia/nitrite (which should be 0) nitrate should be less than 40

If ammonia reading is high, do 25-50% water change daily, add some bioculture, until water reading has stabilized

Feed less, as overfeeding will result in high ammonia, which is toxic for your fish and encourage [algae growth](#).

Don't turn on your light too long, as this will encourage algae growth. For a no real plant aquarium, 5 hours a day is a lot already, a lightly planted tank will require no more than 8 hours of light a day, and a heavily planted tank will require around 12 hours of light per day.

More on this website: <http://answers.yahoo.com/question/index?qid=20090517101527AARApGC>

What are the characteristics of a scientific thinker? 6.1

<i>Clues</i>	<i>hypothesizing</i>
<i>Observe</i>	<i>guessing</i>
<i>investigate</i>	<i>used what you knew already</i>
<i>questions</i>	<i>predict</i>
<i>research</i>	<i>The conclusion of watering plants is water plants once a week.</i>

6.4

- *whole summer fishtank is clean*
- *what were they fed with?*
- *yay fed with fish chips*
- *leaves got brown*
- *Where there differed conditions?*
- *she could be right :(*
- *since the food dissolved that poopy looking thin.*
- *Unicorns making it stink?! Laura...*
- *the plants are decomposing or of course the seaweed smells*

- *Just the filter no scientific explanation but we could experiment on how to prevent the stuff from clogging...*
- <http://www.wikihow.com/Grow-Algae> *that is how you grow algae*

What are the characteristics of a scientific thinker? 6.4

- Think cooperative/collaborating
- hypothesizing (What?!)
- questioning/interrogating Mr.Scanga
- Do research
- Experimenting with models.
- model and reconstruct it
- lots of factors are in the game

-David d-_-b

6.2

- Problem
- Questions
- Curiosity

- Wondering

Theories

- Someone did it
- The food clogged the filter
- The warmth has expanded the growth of the algae
- Something else

Next Step

- Testing it out

What are the characteristics of a scientific thinker? 6.2

- **Observing**
- **Past Experiences**
- **Connected Ideas**
- **Thinking Logical**
- **Experimenting**
- **Reusing and Reducing Other Peoples Ideas**
- **Recognize The Problem**
- **Understand What Be Need To Know**

Keegan

Questions:

Food change?

Sunlight?

Dying plants?

Filter?

Dust?

Ideas:

Filter is clogged(fish food), wore out, broke down.

Fish vomit.

6.3

What are the characteristics of a scientific thinker?

Past knowledge

Ask Questions

Brainstorming

Open-minded

Experimenting

Observing

Researching

Hypothesis/Educated Guess

Inferring

What makes a good experiment?

(summary of ideas from all classes)

creativity

a good question

hard work & effort put into it

open to failure

have the materials you need

solves a problem

freedom to make decisions

safety is considered

new ideas come out of it

challenges thinking

Science Is Vocabulary

If you are having trouble finding ideas, this science vocab list might be a good place to look to help you think of ideas for your article.

1. experiment

2. research

3. hypothesis

4. predict

5. variable

6. procedure

7. constant

8. data

9. observe/observation

10. conclusion

11. infer

12. compare

13. collaboration