

# Slime Day – Introduction to modified QFT (Question Formulation Technique)

## Overview

This pre-lesson will give the UQUEST scientists a chance to engage in a fun science activity in which they will make slime.

### Science Objectives:

UQUEST scientists will

- understand the process of mixing ingredients together to make a new substance

### Materials:

- 1.5 oz glow in dark glue (3 tablespoons)
- ½ teaspoon of baking soda (pinch)
- 1.5 teaspoons of contact solution (little over if too sticky)
- 1 tablespoon of water
- Bowls
- Spoons
- Ziploc bags
- Wipes
- Sharpies to label Ziploc bags
- 4 laminated posters of the 4 QFT rules

### Preparation:

- At UM:
  - Gather correct quantities of all necessary materials
- At OYC
  - Place ingredients on each group's table

## Relaxation

*Before we begin the lesson, we'd like to start off by doing a relaxation activity. When scientists are relaxed, they do better science.*

*For today's relaxation activity we will practice belly breathing.*

- Guide the UQUEST scientists, through some belly breathing for ~1 minute.

## Instructions for UQUEST Guides

1. **Question Formulation Technique**
  - a. Question focus

i. *Hi everyone! To start off our Quest for today, we are going to play the question game. The question game has 4 rules. I will say each rule and ask you to repeat after me. Here is a little poster of the rules. **Show poster.***

1. *First rule is: Ask many questions*
  - a. *Everyone repeat after me. "Ask many questions"*
2. *Second: Do not discuss or answer questions.*
  - a. *"Do not discuss or answer questions."*
3. *Third: Take turns asking questions*
  - a. *"Take turns asking questions"*
4. *Fourth: Change statements into questions*
  - a. *"Change statements into questions"*

ii. *Alright, is everyone ready to play?!*

**b. Place all the ingredients to make slime on the table.**

i. *Look at these items on the table... (pause about 10 seconds)*

1. *What are you curious about when you see all these items?*
2. *What would you like to know?*
3. *Is there anything confusing you?*

ii. *Now, I would like to know all of your questions. When you have a question, raise your hand and I will call on you. Please state your question slowly so I can write it down exactly how you said it.*

**iii. Set a timer for approximately 10 minutes (usually this will only be 5 minutes)**

**iv. REMEMBER the rules for the scribe/guide:**

1. **Write questions word for word, numbered, and (in discussion only), with scientist initials**
2. **Monitor student adherence to the process**
3. **Do not give examples**
4. **Do not get pulled into group discussion**
5. **Acknowledge all contributions equally: "thank you"**

c. *Thank you for all your questions! We will go back to your questions at the end of the day today. Think if you can answer these questions as we go through the activity.*

## **2. Activity**

a. *Today you're going to be making your very own glow-in-the-dark glitter slime!*

**b. Slime Instructions**

- i. *First get a bowl and a spoon to mix your slime ingredients in*
- ii. *Pour 3 tablespoons of Elmer's glue into the bowl*
- iii. *Add ½ teaspoon of baking soda*
- iv. *Add 1 tablespoon of water*
- v. *Mix the ingredients thoroughly with the spoon until the water is mixed completely with the glue*

- vi. *Add the 1.5 teaspoons of contact solution (or ½ tablespoon) and mix with a spoon until the slime begins to form. Add a little more if too sticky.*
- vii. *Once the slime has some formation, use your hands to knead and stretch the slime to make it less sticky.*
- viii. *Add small amounts of contact solution (about ¼ or ½ a teaspoon) if the slime is still too sticky (be careful to not add too much or it will turn hard)*
- c. **Turn off lights to show that the slime glows in the dark.**
- d. **If scientists ask questions during the activity (I.e., why do we use contact solution for slime?) answer the question and also encourage them to ask this question again in the discussion.**
- e. **Pass out Ziplocs for the slime and mark each ziploc with the scientist's name using a sharpie**
- f. **Clean up materials**

### **3. QFT discussion**

- a. *Now that we made slime, we are going to play the question game AGAIN! As a reminder, the question game has 4 rules.*
  - a. *First rule is: Ask many questions*
  - b. *Second: Do not discuss or answer questions.*
  - c. *Third: Take turns asking questions*
  - d. *Fourth: Change statements into questions*
- b. *Alright, is everyone ready to play?! If you had any questions during the activity, now is a great time to raise your hand and ask.*
- c. *I want to know what questions you have about today's activity, making slime.*
- d. *When you have a question raise your hand and I will call on you.*
- e. *For every question that you ask, you will get a sticker.*
- f. *Let's GO! Question time!*
- g. **REMEMBER the rules for the scribe/guide:**
  - a. **Write questions word for word, numbered, and (in discussion only), with scientist initials**
  - b. **Monitor student adherence to the process**
  - c. **Do not give examples**
  - d. **Do not get pulled into group discussion**
  - e. **Acknowledge all contributions equally: "thank you"**
- h. **Once the time to produce questions ends, guide circles the questions from both lists (introduction and discussion) that can be answered**
  - a. **Once all questions are selected, present one question at a time to the scientists for them to try to answer on their own.**
    - i. **If scientists cannot answer, guide answers to the best of their ability.**

- i. **Hand out to the scientists one sticker per question *asked***

# Question Game Rules

1. Ask many questions about the lesson
2. Do not discuss or answer questions
3. Take turns asking questions
4. Change statements into questions

DON'T FORGET YOUR QUESTION WORDS!

WHO?

WHAT?

WHERE?

WHEN?

WHY?

HOW?