



# Lesson 19: OPV Theory

# **Standards:**

#### Health:

1.12.2

1.12.3

2.12.2

2.12.10

3.12.1

3.12.2

5.12.2

5.12.4

#### Science:

1.2

2.1

2.2

2.4

2.5

8.1

8.2

8.3

# Skills Practiced and Gained:

1.1-1.7

# Overview

The third theory discussed in the documentary, "Why Us? Left Behind and Dying" is the OPV Theory. This theory is the "polio vaccine" theory which purports that SIV entered humans through contaminated oral polio vaccines. Unlike the "natural transfer" and "serial passage" theories, the major supporters of the "polio vaccine" are not scientists but journalists. Like the other two theories, you can examine the theory using the Scientific Method to determine where you stand on the validity of the theory.

# **Key Concepts**

Transfer of viruses

Scientific Method

# **Procedure**

#### Part I

View the video module for OPV Theory. Use the following questions to facilitate group discussion or give the questions as prompts for journal entries.

## Discussion/Journal Questions

- 1) What new information did you gather from the video module?
- 2) Do you think "polio vaccine" is a possible way in which HIV emerged? What factors of "polio vaccine" make you think it is possible? What factors of "polio vaccine" make you think it is not possible?
- 3) What other questions or comments do you have?



## **Procedure**

#### Part II

Use the Scientific Method to examine OPV Theory. Either have students/clients discuss their examination of the OPV Theory or assign as a writing exercise.

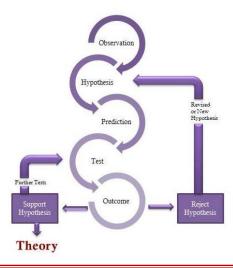
Ask your students/clients:

Do you think "polio vaccine" is a theory or a hypothesis?

## Questions to Consider:

- Do your students/clients think that they have enough information from the video module to answer the question above?
- Have enough successful tests been conducted to establish "polio vaccine" as a theory?
- Will your students/clients have to research "polio vaccine" before answering the question?
- Review all parts of the scientific method. How does the information that you have gathered fit into the process steps of the scientific method?

Reminder, the scientific method is:







# Reminder, steps in the process of the Scientific Method:

In the Scientific Method,

- ☑ make observations of a phenomenon
- ✓ formulate conjectures about the observations
- ☑ use the conjectures to develop one or more hypotheses to explain the phenomenon
- ☑ make predictions from your hypotheses
- ☑ you should be able to test your hypotheses and predictions
- ☑ conduct an experiment to test your hypotheses and predictions
  - ☑ an experiment can be more observations (perhaps in a different setting); it can be collecting historical data; it can be a traditional laboratory experiment with treatment and control groups
- ☑ review your findings and outcomes; the results should either support or reject the hypothesis
  - ☑ if the hypothesis is supported, then it's theoretical value increases and is further tested
  - ☑ if the hypothesis is rejected, then it is revised or you abandon it and start all over again

When a hypothesis has sufficient support, meaning many successful tests must occur, only then will the hypothesis possibly be accepted as a theory.