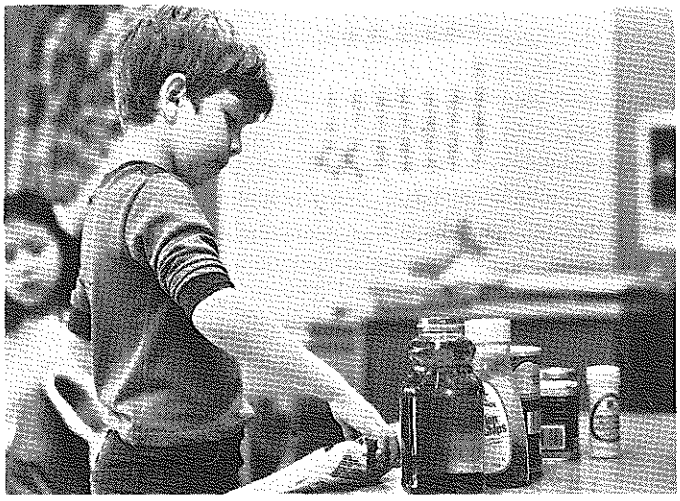
# Philosophy for Children Exercises and A Social Studies Text

Adapting exercises from philosophy for children programs as well as creating new ones for use with a social studies text marks a special goal of our efforts this year at the Regional Day School for the Deaf in Fort Worth, Texas. In meeting this goal, we are attempting to make conceptual analysis and inductive reasoning integral parts of the general curriculum. A social studies text, *The United States and Its Neighbors*, prompted the adaptation and creation of thinking skills exercises.[1] This book, included in a series entitled *The World and Its People*, presents a chapter on "Exploration" in need of conceptual clarification and logical elaboration in the form of such exercises. No thinking skills exercises appear in the "Chapter Review" section of the discussion where a listing of "Key Facts," a "Vocabulary Quiz," some "Review Questions," and a "Skills Development" project involving use of the library test the reader's comprehension of the text.[2] The specially designed exercises add to these various reading activities a thinking skills component.

The following report provides a description of the six exercises designed for use with *The United States and Its Neighbors*. Appearing in sets of three, the first set promotes conceptual analysis of a passage; the second set initiates inductive reasoning based upon another passage in that text. Most of the exercises are adaptations of ones outlined in *Philosophical Inquiry: An Instructional Manual to Accompany Harry Stottlemeier's Discovery* (PI) or ones suggested for use with *Rebecca* (R).[3] However, some of the exercises are new creations tailor-made for investigating the topic of "Exploration" as discussed in this particular social studies text.

The need for exercises demanding conceptual analysis grows apparent at the end of a passage which introduces the topic of "Exploration":

> Have you ever gone exploring? Perhaps you have hiked deep into a wood, deeper than you have ever been before. You might have discovered trees or flowers or insects there that were new to you. Maybe you found a stream you didn't know about. You probably brought back a leaf or a plant to show your parents or friends. Or perhaps you moved to another home and went for a walk around your new neighborhood. You might have found streets and buildings you had never seen before and people you had never met. You probably told your family what you had seen.
>
> If you have ever done anything like these things, you were exploring. To *explore* means to search for new things or places. It means making discoveries.[4]



The last sentence poses the problem. It misleads the reader in its unqualified statement that "to *explore* . . . means making discoveries." Explorations do not always lead to discoveries. Of course, the great explorations launched during the fifteenth, sixteenth, seventeenth, and eighteenth centuries and described in this chapter resulted in discoveries in the New World. However, during the course of a discussion of the chapter, that important qualification may not be brought to bear on this initial generalization. If not, a conceptual confusion regarding the differences between exploration and discovery remains unattended.

The first exercise in the set of three focused on this misleading generalization and forced the students to attend to the differences between explorations and discoveries and, in the process, inventions. After establishing which sign would be used for 'explore' (the sign used for 'seek', 'search', 'look for', or 'examine') and 'discover' (the sign used for 'find'), the students began to list examples of explorations and discoveries. Under 'explorations', the students identified the following: exploring for fossils in a cave, exploring for coral near the ocean bottom, and exploring for rocks on the playground. Under 'discoveries,' they proposed the following: Columbus discovering America, Thomas Edison discovering the light bulb, and Benjamin Franklin discovering electricity. The listing of Edison as a discoverer and the light bulb as a discovery provoked the introduction of additional categories, 'inventors' and 'inventions,' for clarifying his status. An exercise entitled, "Discovery and Invention," (PI, p.7) which challenges the students to identify electricity, electric light bulbs, magnetism, magnets, and televisions as a 'discovery' or an 'invention' helped them to draw distinctions between the two. However, the original distinction between 'explorations' and 'discoveries' was not lost with the introduction of the new category, 'invention.' Returning to the list of explorations and discoveries generated at the outset, the students considered whether exploring the coral on the ocean floor *always* leads to a discovery of beautiful skeletal deposits or whether exploring for fossils in a cave *always* leads to a discovery of animal or plant impressions in stone. One student related that all of Jacque Cousteau's

explorations in the ocean recorded for television lead to discoveries. Another student argued in response that other expeditions not shown on television may not have led to discoveries. That same student recalled a spelunking trip during which he had explored for fossils without finding any specimens. These considerations prompted the students to conclude that many, but not all, explorations lead to discoveries. But, do many, if not all, discoveries arise from explorations? To make a discovery, does one have to be engaged in an exploration? These questions elicited a story from one of the children about finding a fossil without looking for it which set the course for the next exercise.

The second exercise in this set played on the theme of that story about finding fossils and challenged the students to attribute various ways of thinking to the activities of exploring and discovering. Each student in the class assumed the position of an explorer who aims to discover fossils in a cave. However, being novices, each explorer needs a guide to lead him or her into the cave. Six guides are available. Each guide bargains for the job as a leader by making one of the following claims:

*Guide 1* I hope that there are fossils in this cave
*Guide 2* I guess that there are fossils in this cave
*Guide 3* I believe that there are fossils in this cave
*Guide 4* I know that there are fossils in this cave
*Guide 5* I imagine that there are fossils in this cave
*Guide 6* I expect that there are fossils in this cave

Each explorer must choose to follow a guide on the basis of that guide's claim. In choosing, the explorer must consider the differences between hoping, guessing, believing, knowing, imagining, and expecting. The different claims provide an opportunity for the children to distinguish between those guides who propose to lead explorations based upon their own discoveries and those who do not. In the first round of choices, the children decided to follow Guide 2 or Guide 3, treating 'guessing' and 'believing' as synonyms. Might they have been guessing?

The third exercise in this set tested that possibility by asking the children to distinguish between the various claims in another format similar to the one entitled, "Mental Acts" (PI, p. 195). The six terms — hope, guess, believe, know, imagine, and expect — appeared at the top of a piece of paper followed by several sentences in need of a verb. Each student faced the challenge of picking a verb from that list to complete the sentences:

I ____ that 4 + 4 = 8
I ____ that it will rain tomorrow
I ____ that 12:00 A.M. is noontime
I ____ that the Dallas Cowboys will beat the Washington Redskins
I ____ that a handful of sand is heavier than a handful of clay
I ____ that unicorns exist
I ____ that the earth is always turning on its axis
I ____ that Mr. Reagan is President of the United States
I ____ that this winter will be colder than last winter

The various choices made by the students provided an opportunity to discuss the differences between the terms as well as identify some of the connections between them. For example, the students briefly considered whether knowing involves believing and whether hoping involves imagining.

These three exercises emerged as a result of the need to clarify a confusion in the last sentence of the introductory paragraph in the chapter on "Exploration." Each successive exercise pushed the students farther and farther from the text, but closer and closer to the conceptual issues inherent in it. The basic issue regarding differences between 'explorations' and 'discoveries' provided the building blocks for the series of exercises. In tackling that issue, the students proceeded to investigate ancillary issues designed to test their abilities at conceptual analysis. In the end, the children proved capable of drawing subtle distinctions between important concepts such as 'exploration,' 'discovery,' 'invention,' as well as 'hoping,' 'guessing,' 'believing,' 'knowing,' 'imagining,' and 'expecting.'

Another set of exercises tested the students' abilities at logical reasoning and, like the first set, emerged from another passage in the chapter entitled, "Exploration":

*Leif Ericson*

> The Vikings also passed stories about a great explorer named Leif (lāv) Ericson. The stories told that in the year 1000 Leif Ericson had sailed west across the north Atlantic from a Viking settlement in Greenland to a new and unknown land. He named the new land Vinland. The stories also said that after Leif's discovery, other groups of Vikings settled in this new land. They built stone houses. They planted crops and raised cattle.
>
> But old stories alone are not proof that something really happened. If there had been settlements, they had disappeared. Certainly no other European settlers had followed the Vikings to the new land. However, 20 years ago, archeologists discovered the remains of some old stone buildings in Newfoundland. Find Newfoundland on the eastern coast of Canada. You can see it is not very far from Greenland.
>
> The archeologists could prove that the oldest building they found had been built by the Vikings. They were able to tell that these buildings had been built about A.D. 1000. Many Viking artifacts were also discovered nearby. Now there was real proof that the Vikings had come to North America as early as the year 1000.[5]

The distinction suggested in this passage between no proof in the form of old stories and "real" proof in the form of archeological finds raises the issue of evidence in reasoning inductively. After discussing reasons why old buildings and artifacts provide evidence whereas old stories do not for proof of Viking settlements in the New World, the students engaged in three exercises involving inductive reasoning.

The first exercise in this set, based upon one entitled "Inductive Reasoning" (PI, pp. 112 - 113), provides evidence for certain conclusions and challenges the students to evaluate whether the evidence supports or fails to support the conclusion:

Proof I I get sick when I eat ice cream
I get sick when I eat candy

I get sick when I eat cake
I get sick when I eat food

Proof II It was cold on Monday
It was cold on Tuesday
It was cold on Wednesday.
It will be cold on Thursday and Friday

In regard to Proof I, the children immediately offered counter-examples to the argument, pointing to pizza, for example, as a food which does not make them sick. They concluded, therefore, that the evidence provided for that proof does not support the conclusion covering all foods. In regard to Proof II, the students agreed that the evidence supports the conclusion. A question concerning the need for adding the qualifier, "probably," to the conclusion led to a discussion about the certainty with which forecasters predict the weather. The question, "Upon what do weathermen base their predictions?", ended the first exercise and paved the way for the second.

The second exercise returned to this question after a review of the issue of evidence. The exercise assumed the following form:

Conclusion: Leif Ericson discovered Newfoundland

| Evidence 1 | Evidence 2 |
|---|---|
| old stories | archeological finds |

Which evidence supports the conclusion, 1 or 2? Why?

Conclusion: I am taller this year than I was last year

| Evidence 1 | Evidence 2 |
|---|---|
| I look taller | I measured my height and found myself to be taller |

Which evidence supports the conclusion, 1 or 2? Why?

Conclusion: This winter will be colder than last winter

| *Evidence 1* | *Evidence 2* |
|---|---|
| My big toe always hurts when the weather gets cold and it hurts more this year than last year | The weathercaster predicted that this winter will be colder than last winter |

Which evidence supports the conclusion, 1 or 2? Why?

In each case, the children identified Evidence 2 as support for the respective conclusions. Commentary on the last two examples emphasized the use of measurement in providing the supporting evidence in both cases. The final example concluded with the question, "What if the weatherforecaster had predicted that 'This winter will be colder than last winter' on the grounds that his big toe hurts when the weather gets cold and that it hurts more this year than last year?" The children answered in unison that anyone using that kind of argument does not deserve the title of a weatherforecaster.

The third exercise, based upon one designed for use with *Rebecca* (R, p. 4) involves several props, specifically, a bag covering a pot which contains six apples and six oranges. Green paper and a bow decorate the pot. The children passed the bag around their circle, holding it and shaking it, smelling it and examining it. They established three pieces of evidence on the basis of their observations:

1) The bag is heavy
2) The object in the bag rattles
3) The object in the bag is green

The first question of the exercise addressed the children's attention to the object inside the bag — "On the basis of the evidence you have gathered, do you think you will like or dislike the object in the bag? Several children immediately answered that they would like the object. However, they could not answer the question, "Why?" After struggling to answer it, they admitted that the three pieces of evidence did not support the conclusion about liking or disliking the object. Not enough evidence was available at that point to make such a decision. After removing the pot from the bag, the students once again observed the surprise, but this time at close range. Only one additional piece of evidence emerged from this second observation:

4) The object smells like apples

At this point in the exercise, the children learned from the teacher that twelve small objects rather than one large object filled the pot as he proceeded to write on the blackboard:

*Twelve Objects in the Pot*

| | |
|---|---|
| Object 1 | Object 7 |
| Object 2 | Object 8 |
| Object 3 | Object 9 |
| Object 4 | Object 10 |
| Object 5 | Object 11 |
| Object 6 | Object 12 |

Without delay, the teacher withdrew Object 1, an apple, from the pot and placed it on the table in front of the pot, addressing another question to the students — "On the basis of the evidence you now have about Object 1, that it is an apple, can you draw any conclusion about Object 2?" Most of the children predicted that Object 2 would be an apple, but one student guessed an orange while another wished for a banana. Asked if one apple was ample evidence to support any of these claims, including the one underlying them that the next object would be a foodstuff, the children reconsidered their suggestions, realizing the difficulties of making any substantial prediction at this point in the exercise. However, following the withdrawal of Object 2, another apple, the students grew in their confidence about predicting Object 3 to be an apple. They were shocked to discover Object 3 to be an orange. At this juncture, the children began to base their predictions on a principle of symmetry applied to the arrangement of the objects on the table in front of the pot. For example, seeing two apples and one orange on the table's edge, they called for another orange to emerge to balance the oranges

with the apples. After three oranges had been withdrawn in a row, they predicted two apples would follow to match the number of oranges on the table. Shifting the arrangement of apples and oranges elicited different predictions from the children, depending upon the symmetrical problem facing them. Soon, one student guessed that the pot contained two groups of fruit, apples and oranges, and the exercise ceased. Following the withdrawal of one or another object or group of objects from the pot, the students had attempted to reach conclusions in the form of predictions based upon the evidence at hand.

These three exercises emerged as a result of the desire to explore the issues related to evidence and proof raised by the author of the paragraph about Leif Ericson in the chapter on "Exploration." In tackling these exercises, the students engaged in inductive reasoning at every turn, the kind of reasoning implied, but not identified, by the author as necessary for reaching conclusions about Leif Ericson's discoveries in Newfoundland. They proved capable of thinking along these lines in attempting to understand the differences between strong evidence, and weak evidence for reaching conclusions and constructing proofs.

The collection of six exercises designed specifically for use with *The United States and Its Neighbors* meets a need unfulfilled by the particular set of activities listed at the end of the chapter on "Exploration." The exercises adapted from philosophy for children programs or created anew add a thinking skills component to the study of the chapter. Conceptual analysis and inductive reasoning become integral parts of the study of "Exploration" and continue to play a key role in the discussion of subsequent chapters in the Social Studies text. Adapting philosophy for children exercises or creating new ones for use with this text or others in different subject areas such as history or science makes analytic thinking an important component in the general curriculum.

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## NOTES

[1]Timothy M. Helmus et al., *The United States and Its Neighbors*, The World and Its People Series (Morristown, N.J.: Silver Burdett Company, 1982).

[2]Timothy M. Helmus et al., *The United States and Its Neighbors*, pp. 82-83.

[3]Matthew Lipman, Ann Margaret Sharp, and Frederick S. Oscanyan, *Philosophical Inquiry: An Instructional Manual to Accompany Harry Stottlemeier's Discovery* (Upper Montclair: The Institute for the Advancement of Philosophy for Children, 1979)
Ronald Reed, *Rebecca*

[4]Timothy M. Helmus et al., *The United States and Its Neighbors*, p. 64.

[5]Timothy M. Helmus et al., *The United States and Its Neighbors*, pp. 66-67.