

## NOTES ON SPORTS DIAGRAMMING DVD

January 20, 2006

## Sample

Four groups of gender homogeneous fourth graders, 3 per group, met separately at my house on Jan. 15-16. Two groups were quite talkative and engaged (referred to on DVD as talkative girls and boys). Two groups were quiet (quiet girls and boys). I had worked with all the children in a weekly science club last year; one had been in CyberQuest evaluation. Each threesome comprised close friends, playing at each other's houses. The families are middle class.

Sports and diagramming experience: (see DVD scenes 5, 10, 15, 22)

None of the children reported having experienced diagramming in school. About half were familiar with diagramming plays in televised football. Two reported that their basketball coach uses his hand as a diagramming technique (see scene 15).

The groups varied in sports experience (see scenes 5, 10, 15, 22)

In talkative girls, one girl (Ally on right) plays soccer and was a leader in the group; the other two girls do dance but were willing to get into the idea.

In talkative boys, one boy (Satchel on right) played a couple of years and was a leader in the group. Two boys play basketball (and clearly did basketball plays on the feltboard) and one boy (Jack on left) plays baseball.

In quiet boys, one boy (Kris in center) played soccer once upon a time, two played baseball and one played football. The football player was a leader in the group diagramming.

In quiet girls, no one had played soccer. One (Carly at left) plays lacrosse, and she seemed to have more of an idea of how to set up a play. You'll notice that I called on her because she was the only one who moved toward the board at all and looked at all engaged with the task.

All children felt comfortable doing the diagramming tasks and had no problems understanding the representational features. Sports experience appeared to be the determining factor in facility in producing plays. The kids were fine on "consumption" and less able on "production" when they had less related sports experience.

Off camera, I asked whether they were viewers of Cyberchase. Of those who were viewers, they felt that sports diagramming was a good problem to show on television for their age group.

**Procedure** (see Talkative girls, scenes 1,2,3,4 for full presentations of the procedure)

The threesome began by kicking a real ball around (gently in my kitchen), and then kicked in a triangle with three passes total. They diagrammed that passing triangle on a feltboard. (scenes 1, 6, 11, 16)

Each group was presented with a "ball game like soccer" setup in which their yellow team members could move freely without the ball and passed when they had the ball. The opposing green team lined up in front of the goal but did not move. ("Opposition doesn't move", scenes 2, 7, 12, 17)

A second setup permitted the green team to move. ("Opposition can move", scenes 3, 8, 13, 18)

Another setup, used with some groups, had a child play the opposition team. ("Child plays opposition" scenes 4, 9, 21)

<u>Note</u> that I permitted the talkative boys to 'dribble.' This created some interesting attempts to represent dribbling on the feltboard (scenes 13, mainly 14). This group has the basketball players and some plays clearly use basketball jargon and plays.

Some other variations are on the DVD: Yellow can move after passing: scene 14 Each girl moves 2 players: scene 19 Child as coach: scene 20

Variations 19 and 20 were attempts to get my quiet girls to be more engaged, not very successfully, I'm afraid.

## Results

<u>Bottom line</u>: None of the children showed difficulty understanding the diagramming of plays and using the symbols to represent players and ball passes. Their difficulty appeared to be more in the invention of a sports play. Those with more experience appeared to have less difficulty in the construction of a play. And over the course of our session, even those less experienced managed to produce plays. They were able to construct and use the diagrams to show passing strategies to make goals, and most groups started with triangles for their initial plays. Thus, I think your audience (at least 4<sup>th</sup> and above) will have no trouble understanding what you show them in terms of diagramming plays, even though they do not have school-based experience with diagramming.

<u>Restrictions</u>: The kids did not have trouble with the restrictions of moving when you don't have the ball and passing when you do. They had more trouble dealing with the

diagramming when there were no restrictions; that is, when both teams can move anywhere. Under the more open conditions, some were less able to talk to each other coherently to come up with a play, and the talkative boys started diagramming plays with running patterns, fakes, fouls, and movements all over the board (see scene 14).

<u>Diagramming techniques:</u> The technique noted by the talkative boys of using a hand to diagram a play (scene 15) might be used in the show as a false start or not-sufficient technique in problem solving. So, for example, Jackie might try to use her hand before Matt comes up with a better idea (drawing on the ground?). One of the talkative girls explained that her soccer coach positioned them on the field and explained a play but did not diagram symbolically.

<u>Type of sport:</u> Soccer still appears to be the logical sport to reach both girls and boys, although my boys tended to be more baseball players than soccer.

<u>Gender</u>: I didn't observe gender differences that could not be explained by the kids' sports experience. Kids from both genders were not sports players, and kids from both genders had experienced soccer. Kids from both genders had viewed the Chicago Bears' football game.

<u>Movements</u>: The animators might find it instructive to watch how the kids kicked the real ball.

## **Consent to use DVD**

I have consent forms from every parent that permits WNET to "use such recording for any proper and legitimate educational purpose associated with the television program Cyberchase."