

Radical Raceway

Training School Psychologists to be Experts in Evidence Based Practices for Tertiary Students with
Serious Emotional Disturbance/Behavior Disorders

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US Office of Education 84.325K
H325K080308

RADICAL RACEWAY



Axelrod (2009) defines homework as tasks that teachers assign students outside of the school and can serve many purposes, including developing self-discipline, organization skills and provide repetition of skills that were learned during the school day. Not completing homework can often disrupt classroom routines. Establishing classroom routines is a key component for preventing disruptive behavior from occurring in the classroom (Bowen, 2004). Because these skills can be necessary in future daily living, it is important that students correctly complete homework on a regular basis. Radical Raceway is class-wide homework

intervention program targeted to improve homework completion and homework accuracy.

What is Radical Raceway?

Radical raceway is based on evidence-based intervention. It is designed for students between kindergarten and 8th grade. It is a class-wide intervention designed to motivate students to complete their homework and do so accurately. It utilizes: 1) group contingencies, 2) public posting, 3) mystery motivators, 4) variable reinforcement schedule, and 5) positive reinforcement.

Reasons to use Radical Raceway

1. To improve homework completion rates.
2. To improve homework accuracy rates.
3. To improve home-school relations.

4. To establish and reinforce consistent class-wide expectations

Target Population

Radical Raceway should be used with classrooms that struggle to complete their homework and that struggle to complete their homework accurately. It is not an intervention designed to help students learn material; rather, it is an intervention designed to help students who struggle to complete their homework. It can be used with a wide range of classroom subjects and is not restricted to a general education classroom.

Evidence-Based

While no research has been conducted on the effectiveness of Radical Raceway, there is a significant body of

research that supports the principles and components upon which Radical Raceway was constructed.

Group Contingencies

A group contingency is a situation in which the performance of one or more individual affects the outcome for other individuals. Radical Raceway incorporates an interdependent group contingency for students to receive rewards. This is a strategy in which consequences are contingent upon the entire group making a certain criteria.

Skinner et al. (2004) found that grouping students and having consequences given interdependently among groups has successfully been used to enhance student academic performance. In Stage and Quiroz's (1997) meta-analytic study of interventions to decrease classroom disruptive behaviors, they found that

group contingencies had the highest effect size for reducing problem behaviors in the classroom, when compared to all other interventions incorporated into the meta-analysis (-1.02).

Public Posting

Public posting is the acknowledgement of an individual's or group's performance in a place where it can be observed by others. Jones and Van Houten (1985) showed that public posting was an integrated part of an intervention that reduced disruptive behaviors and improved academic outcomes for secondary students.

Mystery Motivator

A mystery motivator is an unknown, high-value, contingent reward. It creates a sense of anticipation due to its secrecy. Moore and Waguespack

(2004) suggest that mystery motivators are an effective, socially valid intervention that can be implemented in the classroom with integrity. Also, in Jennifer Hoag's dissertation (2007) of the effects of mystery motivators as compared to expected reinforcers, she found that mystery motivators were more effective than expected reinforcers at reducing disruptive behaviors among preschool students.

Variable Reinforcement Schedule

When a student has access to a reward randomly, rather than expectedly, they are on a variable reinforcement schedule. Ferster and Skinner (1957) described this schedule of reinforcement as the most reinforcing schedule when compared to other schedules of reinforcement (continuous, intermittent). Beaman et al. (1983) found that behaviors placed on a variable

reinforcement schedule were more resistant to extinction than behaviors placed on a regular schedule of reinforcement. A variable reinforcement schedule is the premise in which mystery motivators, and subsequently Radical Raceway, is based on.

Positive Reinforcement

Positive reinforcement is the act of rewarding a student for correct behavior by giving the student something they find to be rewarding. By rewarding the student, the behavior subsequently increases in order to receive more reinforcement. Positive reinforcement can come in many different entities such as praise or intrinsic rewards. Stage and Quiroz's (1997) meta-analytic study of intervention to decrease classroom disruptive behaviors found reinforcement to have a large effect in

reducing disruptive classroom behaviors. They found mean effect size of -.86 for the studies included in their meta-analysis.

Radical raceway incorporates group contingencies, public posting, mystery motivators, variable reinforcement schedules, and positive reinforcement strategies into a single intervention. Cars and racing were used to motivate students to succeed with the intervention. The evidence-based intervention strategies, along with a popular motivating agent, will provide positive homework results for classrooms struggling to complete their homework.

Material Needed

1. Mystery Motivators
2. Racecar Reward Sheet
3. Crayola Color Changeables™ Markers

4. Rockin' Racecars
5. Student/Team Progress Tracking Sheet
6. Radical Raceway

How Radical Raceway Works

Each time a new race begins, students are placed, or randomly assigned, into teams. These teams are color coded so each team is represented by their color.

The students will receive their individualized Racecar Reward Sheet at the beginning of each week (with the invisible mystery motivator indicators already placed into random boxes). When the students successfully bring completed homework assignment to school, they are allowed to color in the “completed” box for the day. If the student completes their homework and achieves or succeeds the set criterion of accuracy for the week, the child will also be able to color in the “accuracy” box for

the day. If a student colors in a box that has a mystery motivator indicator in it, the student will receive the small mystery motivator.

The Rockin' Racecars are used for the team aspect of Radical Raceway. The teacher places each student's score into the Progress Tracking sheet provided in the intervention. The teacher then attains the team's average accuracy score from the data. The team with the greatest accuracy score for the day will be the "Racers of the Day," and their team's racecar will move along the Radical Raceway racetrack. If teams are tied for the highest average accuracy score for the day, both teams' racecars are moved for the day.

The teams can monitor their progress along the raceway throughout the race. The team that reaches the finish line of the racetrack first, wins the race and receives the large mystery

motivator. At the culmination of a race, teams are separated into new teams and a new race begins.

Steps to Implement Radical Raceway

With implementing Radical Raceway the teacher's initial step is to teach the desired homework expectations to the students. Explain to the students the components of Radical Raceway and how they can earn rewards.

- 1) Place, or randomly assign, students into groups (teams). If a teacher wishes to place students into teams, it is recommended the teacher place excelling students with struggling students. There should be no more than five teams.
- 2) Establish your mystery motivators. A mystery motivator is an envelope,

placed in front of the class with a large “question mark” placed on the front. The “question mark” symbolizes the secrecy of the reward inside the envelope. The reward should be written on a piece of paper and placed inside the envelope. In Radical Raceway, two mystery motivators will be used, a small and a large mystery motivator. The small mystery motivator should be a small prize such as a piece of candy while the large mystery motivator should be largely reinforcing to the students, such as a free homework pass.

3) Establish individualized racecar reward sheets. These sheets are given to each student at the beginning of the week. Each sheet has columns for the days of the week and rows indicating “completion” and “accuracy” of the student’s homework. There is also a section at

the bottom of the sheet where teachers can make comments to the parent for when the student brings home their racecar reward sheet at the end of the week.

4) Establish a set criterion of accuracy for the week. This criterion of accuracy should be based on the classroom level of accuracy. The criterion level of accuracy should be established weekly and should not be too low that students can easily achieve success or too high that students cannot achieve success. A guideline that teachers can use is using the accuracy score of the student at the 84th percentile. This criterion of accuracy should be hidden from the students.

5) Place mystery motivator indicators in random boxes in each student’s racecar reward sheet with the Crayola Color Changeables™ Markers.

This should be done with the invisible ink marker so the students do not know which boxes have mystery motivator indicators in them. Student will later color in the boxes (based on completion and accuracy criteria of their homework) with their markers to reveal these indicators.

The number of mystery motivator indicators for each student's racecar reward sheet should be individualized. A student struggling to complete their homework accurately should have more indicators (one indicator box for every three non-indicator boxes) while a student who is excelling in their homework should have fewer indicators in their boxes (two indicator boxes a week).

6) Introduce each team to their Rockin' Racecars. Each team's car should be

distinguishable from other teams' cars. Cars should be color coded so each team can be categorized by the color of their racecar. Each racecar should have Velcro on the back of the racecar so that it can attach to the Radical Raceway.

7) Post the Radical Raceway in front of the class. The Radical Raceway should be visible for all students. The raceway should have distinguishing marks so each student knows what progress will be made for being the "Racers of the Day" (There should be no less than five and no more than fifteen distinguishing marks on the racetrack). The Radical Raceway road should have Velcro lining on it so racecars can move easily along the track.

8) Track individual daily progress through the Progress Tracking Sheet provided. Place each student's

accuracy score in each box. If a student has been excused from completing the homework (not in attendance, free homework pass, etc.) the teacher should not place any score in the box. If a student has failed to complete their homework, a score of zero should be placed in the student's box. From the tracking sheet, data can be gathered.

- a. The sheet will calculate the average score of each team daily (an excused assignment will not count for or against a team while not completing an assignment will hurt the team).
- b. By using the tabs at the bottom of the progress sheet, a teacher can track individual student progress, student progress when compared to

his/her classmates, or progress by a team.

Troubleshooting Radical Raceway

Potential Problems and Solutions:

- 1) Student does not want to participate in the Radical Raceway.
 - a. Inform them that non-participation is OK but they will lose out on possible rewards.
 - b. Allow the student to identify possible reinforcers they would want the mystery motivator to be.
- 2) Student does not bring back homework/sabotages team.
 - a. Place the saboteur on his/her own team.
 - b. Allow the saboteur to create his/her own racecar.

- c. Allow the saboteur to move the racecars for each day.
- 3) A student complains about the reward.
 - a. Before implementing the intervention, explain to students that complaining will result in a loss of the reward.
- 4) Student tries to color in multiple boxes.
 - a. Make the mystery motivator indicator small the box.
 - b. If behavior reoccurs, suspend the program for the individual.
- 5) Student loses their Racecar Reward sheet.
 - a. Before implementing the intervention, explain a penalty clause for losing one's mystery motivator sheet.

Troubleshooting the Progress

Tracking Sheet

- 1) Adding a new student into the progress tracking sheet
 - a. Mark the cursor where you would like the new student to be placed on the tracking sheet
 - b. Click on "Insert," then "Row"
 - c. Type in the student's name
 - d. On the taps at the bottom, right click on the "+" tab and select "insert chart sheet"
 - e. Right click on the graph and select "Select Data"
 - f. Select all days applicable for the new student
- 2) Deleting unwanted student rows
 - a. Highlight the row for the student you want to delete
 - b. Right click and select "Delete"
 - c. Select "Shift cell up"

Cautions with Radical

Raceway

- 1) Teachers using Radical Raceway should always inform parents before beginning the intervention. This can help establish better communication between the home and the school. This also gives the teacher an opportunity to explain the benefits of using Radical Raceway how the intervention can positively affect their child.
- 2) Teachers should always be aware of possible allergies when given extrinsic rewards to students. Teachers should become aware of these allergies and select alternative rewards for students who may need them.

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Materials

Racecar Reward Sheet

Bullz-Eye Bronco

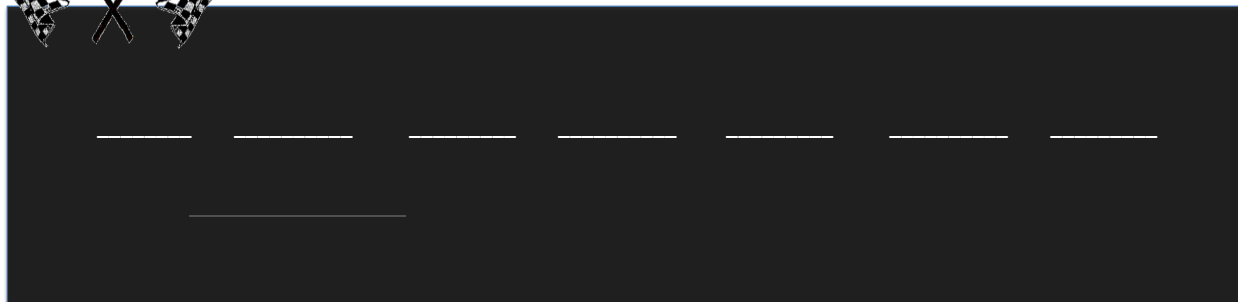


	Monday	Tuesday	Wednesday	Thursday	Friday
Complete					
Accurate					
Comment					

Rockin' Racecars



Radical Raceway



Student/Team Progress Tracking Sheet (reference online resource)

Team/Day	1	2	3	4	5
Green Team					
Student 1					
Student 2					
Student 3					
Green Average	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Red Team					
Student 4					
Student 5					
Student 6					
Red Average	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Orange Team					
Student 7					
Student 8					
Student 9					
Orange Average	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Blue Team					
Student 10					
Student 11					
Student 12					
Blue Average	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Yellow Team					
Student 13					
Student 14					
Student 15					
Yellow Average	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Small Mystery Motivator Ideas

- Piece of candy
- Tell a joke to the class
- Free problem on next homework
- Read aloud to the class
- First in line to recess/lunch/home
- Stickers
- Good note home
- Indicating they are one of the
“Racers of the Day”

Large Mystery Motivator Ideas

- Extra recess time
- Free homework pass
- Lunch with the teacher
- Class presentation
- Show-and-Tell
- Large candy