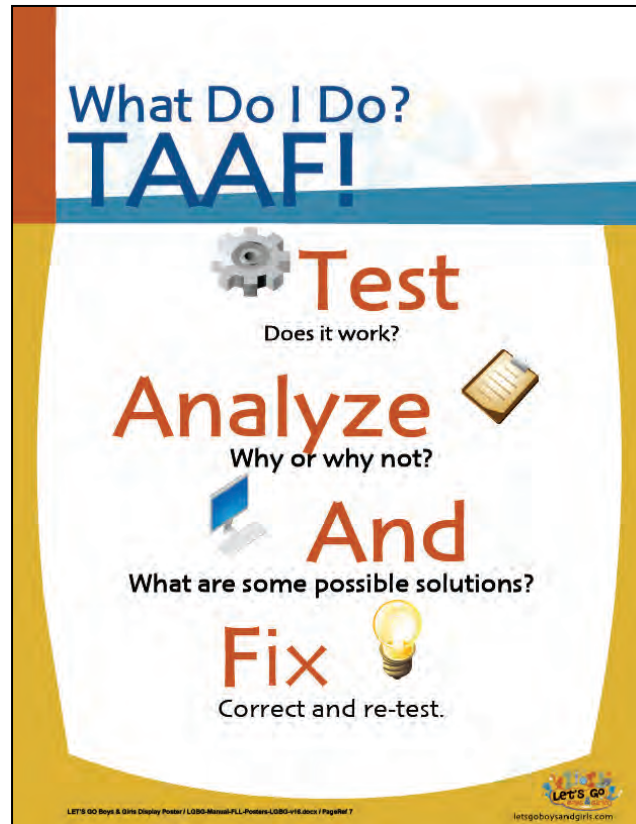


Session Overview

During each session:

- Students pace themselves through a series of sequential robotic building or programming activities.
- Students use a built robot (first skill demonstrated) at each session.
- Students watch the teaching tutorial for each skill.
- Students individually write a program based on the tutorial. They will then download their program to the shared robot and begin the following method systematically: TAAF: Test, Analyze And Fix



- **NOTE:** While student is refining the program on the computer or watching a new teaching segment on the computer, someone else in the 'group' uses the robot. Students may need to wait while someone else finishes using the robot – this is a good skill for everyone to learn.
- It is recommended that students work at the same computer each week and/or use a profile/login screen. See appendix – Student/Group Profile and File Saving for more details.
- Students keep track of their progress in their personal progress file; therefore it should not be a problem if they miss a week. Each time they attend a session, they pick up where they left off.
- Students demonstrate to an adult leader mastery of each skill/level to earn stickers. Leader then signs off on students Activity Checklist.
- Students with experience at programming are encouraged to mentor/assist new kids to the academy.

Team Options

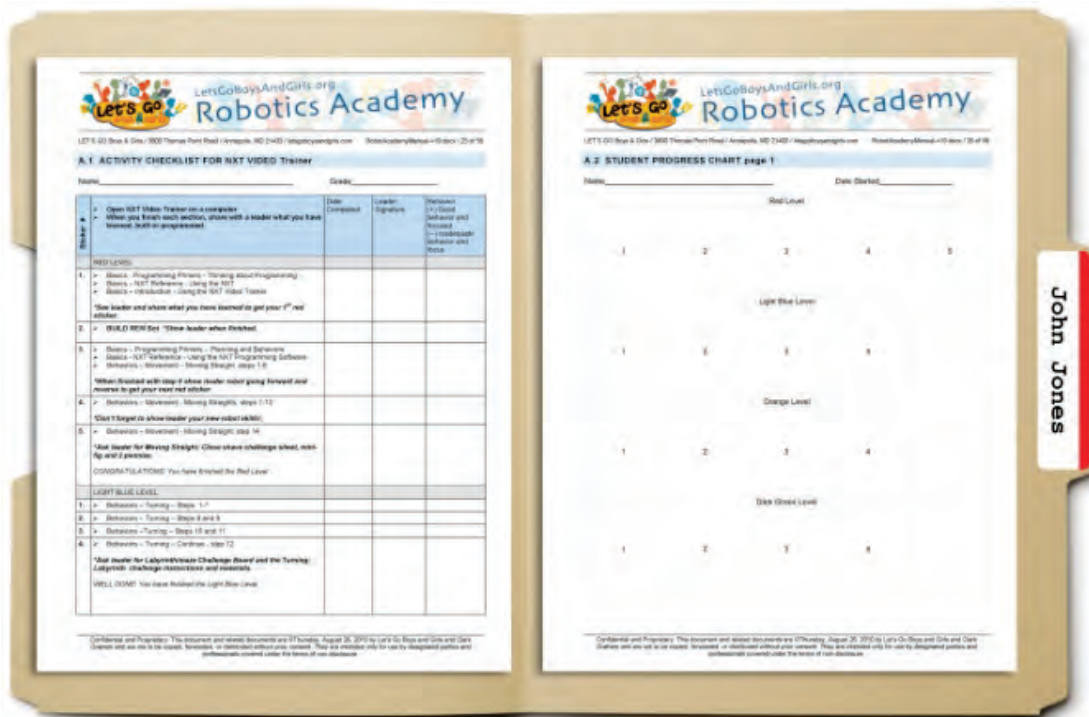
One way to encourage participation and teamwork is to have student sign up with a partner(s).

- Students form 'permanent' teams of 2-3 students – preferably 2 with 'help' from leaders as needed.
- Students work through the exercises together, but preferably at their own computers.
- Success belongs to the team.
- If a team 'doesn't work' then students can request to form a new team.
- A team member can be dropped from a team due to lack of commitment and attendance.
- At the end of each activity/skill students demonstrate to the leader that they ALL understand it.
- If a team member misses a session, the other member of the team will be responsible for teaching them the missed skill.

See more details in Section 1.0 Managing a Robotics Program: Team Work.

Monitoring Student Progress

Student Progress is tracked using two tools. Each student participating in the academy will be given a Progress Chart and Activity Checklist. These forms should be attached to a file folder, as shown below.



Sample Progress Folder

Activity Checklist

 Activity Checklist Unit 1 Name _____ Grade _____				
Skill #		Date Completed	Leader Signature	Behavior (+) Good behavior and focused, (--) Inadequate behavior and focus
RED LEVEL				
1	> Open <i>NXT Video Trainer</i> on a computer > When you finish each section, share with a leader what you have learned, built or programmed.			
2	> BUILD REM BOT Show leader when finished.			
3	> Basics – Programming Primers – Planning and Behaviors > Basics - NXT Reference - Using the NXT Programming Software > Behaviors – Movement – Moving Straight: steps 1-6 When finished with step 6 show leader robot going forward and reverse to get your next red sticker.			
4	> Behaviors – Movement - Moving Straight: steps 7-13 Don't forget to show leader your new robot skills!			
5	> Behaviors – Movement - Moving Straight: step 14 Ask leader for Moving Straight: Close shave challenge shear, mini-fig and 2 pennies. CONGRATULATIONS! You have finished the Red Level!			

It is also necessary to keep track of what skill activities a student has completed during each session. An Activity Checklist is located in the Reproducible section that can be copied for this purpose.

- Column 1 lists the skill activity.
- Column 2 is filled in when the skill activity is accomplished.
- Column 3 is a place for the leader to sign when he or she has reviewed the skill with the student. This may take the form of the student demonstrating a program on the robot, or answering questions related to the video in that skill level. Each skill level on the *NXT Video Trainer* has 'Check your understanding' questions that are an excellent tool to use to determine if a student watched the video and understood the material.
- Column 4 provides an opportunity for the leader to record student behavior. A (+) for good behavior and focus or a (--) for unacceptable behavior and focus.
- If a student doesn't finish an activity completely before the end of the session, the student should write on a Post-it® note the activity name and the number of the step where he or she stopped.