

## Picture This Study Guide

**Usual disclaimer:** Check the 2014-15 rules because these hints are based on previous rules.

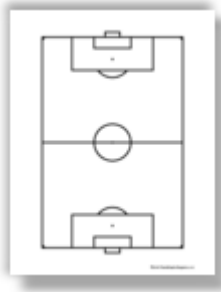
**Team selection:** Aim for three students that have a broad science background, good at memorizing, and are good with words. It really helps if they are also able to practice each week together since they will be brainstorming how to draw certain terms. It's possible on skype but always better face to face. Kids with established friendships, and working relationships are preferred. There will need to be a lot of trust in the partners and it's best to avoid teen drama in this threesome. Ideally, the team members will also be in a wide variety of other SO events, allowing them to all bring in different vocabulary words. Students don't have to be artistic or even neat, just neat enough to differentiate what is being drawn. Remember that each of the three students will draw 1/3 of the terms so each must be able to remember what to draw and how they agreed to draw it. It's OK if one of the trio is a little weak on vocabulary as long as the other two are strong because that weaker student will not ever be guessing alone; he'll always guess with one of the stronger two.



**The event in a nutshell (based on old rules):** Exactly three team members will have four minutes to draw, Pictionary-style, up to 25 science terms, each of which can consist of one or more words. One student will draw ("drawer") and two will guess ("guessers") until either the drawer passes or the guessers get the term right. Then the job of drawing rotates among the three students. The supervisor shows the term to be drawn to the drawer. The drawer can draw blanks if the term is more than one word and can write the word in the correct blank as the guessers guess it. So, if the term is "electric field" the drawer can draw on the paper two blanks like this: \_\_\_\_\_ . If one of the guessers says "field" then the drawer can put it in the second blank. If the drawer passes, the term will not be shown again and no points will be awarded on that word. Winning team guesses the most words, with tiebreaker the fewest passes, then quickest time.

**Strategies that worked for our team:** Although we did not advance to nationals, our C division team got gold in both regionals and state in Picture This! Here are our winning hints:

- 1) Carefully pick the team and make sure that they communicate well with each other. If there is an "outsider" on the team, it will hinder learning and progress and the outsider might get blamed when things don't go well at competition or practice.
- 2) To come up with the practice words, start with the glossaries and indices of science texts. Also, the internet contains many science words. A couple of months after event assignments, the kids on the teams should know vocabulary words for their events, so bribe them. Each student that submits a list of 50 words related to his event will get a candy bar for each event that he submitted a list for. Even building events can come up with some words! Make sure that you include event names, such as anatomy, that are also science words.
- 3) In addition to words from other SO students and from textbooks, don't forget to look at collections of words. The periodic table, Moh's scale of hardness, etc. all are composed of many science words.
- 4) Check scientific catalogs for lab equipment and chemicals. These terms can show up too.
- 5) Don't limit the word lists to concrete nouns, but also remember processes and actions such as hypothesis, evolve, reproduce (that's a fun one to draw, right?), and react.

- 6) If students get a well-practiced word during competition, they should start with the most unique part of the drawing that they've already decided on. Let's say that they get "electric field." They've already decided that a field looks like this:



The most distinctive part of this drawing is probably the  in the middle. So instead of starting with the outside rectangle (which could be the beginning of hundreds of terms), the drawer should start with the  and perhaps the guessers will know that one of the words is field before the drawer starts on the outer rectangle or goal areas. At state, our team was able to guess the term "succession" in about 2 seconds with two connecting lines using this hint.

- 7) When the students come up with a drawing for a term or word, they should strive for the most distinctive and easiest to draw symbol. The symbol doesn't have to relate directly to the scientific term. The example of "subduction" above is a good use of words for syllables. As the students study word lists, they will notice that certain syllables are used over and over. They can come up with a symbol for the syllable. When our C team was working on this a few years ago, they saw "gen" a lot (genetics, antigen, etc.). So, they created a head of a girl named "Jen" to draw to represent "gen." Her hair went wildly to the right side. So whenever someone drew a circle (no need to add the face after several practices) and a shock of crazy right-leaning hair, the guessers knew that gen was in the word. If the symbol was towards the right of the paper, then "gen" was near the end of the word, and it would be to the left if the word started with "gen." Be sure to check the current rules to make sure this is allowed.
- 8) If during competition, the drawer is given a never practiced word, he must quickly decide whether or not to attempt it or to immediately pass it, remembering that there are just 240 seconds (about 10 seconds per word if they attempt all 25 words). Here are some factors that a drawer must quickly evaluate when seeing an un-practiced word:
- Does one of the guessers probably know this word? If so, it might be worth trying.
  - If neither guesser probably knows the word, then is the word one that can be made out of syllables. If the drawer is given "subduction zone" and they've never practiced "subduction" but the drawer figures he can draw a sub (submarine = oval with periscope), duc (a duck of course), and tion (stick figure with nose in air appearing to "shun" something), it's worth a try. Perhaps in a few seconds, the drawer wants to pass.
  - Have they already passed on a lot of terms? If so, maybe they should try this one.
  - Are they "ahead of schedule" and have already identified many terms and have some time to spare? Then, give this one a try.
  - Are the previous terms hard or easy? If they've already gotten a lot of easy terms, then perhaps a pass would allow them to get back to more easy words. If the terms so far have

been really tough, maybe they should give this term a try too because it's not likely to get any easier.

This decision must be made in a split-second so the drawer doesn't really have time to go through this checklist during the tournament, but during practice, he can pause the timer and talk it through with his teammates.

- 9) Don't put too much stock in the chatter on scioly regarding Picture This! scores. A team might nail all 25 terms in competition if the terms are easy. Similarly, a team might only get six or seven terms if they are really challenging. So, don't let the students get discouraged if they are "scoring low" during practice. Instead remind them that scores are very dependent on the difficulty of the term list. Similarly, don't let them get too complacent if they are scoring much higher than what is being reported on scioly! The only scores that really matter during a competition are the scores of that competition only.
- 10) Remind the students to thank the event supervisor, who is a volunteer and has to watch 30 or so team and determine team placement. It's a big job.

**What a practice might look like:** Starting three months before regionals, our team practiced once a week for about three or four hours at a time, with some breaks. Being prepared for long practices as that makes good use of the time. Each team will find their favorite way of practicing. Here is what we did:

- 1) At the beginning of the season and as the season progressed, I (the coach) created a master list on an Excel spreadsheet of the terms we were using in our practice. I sorted them alphabetically and that way, when I got some new terms, I could make sure that none of them were repeats. We ended up practicing over 1400 terms. I tracked the field of science (anatomy, astronomy, earth science, lab equipment, etc.), when we practiced the words, what lists they are on, etc. It seemed like overkill early in the season, but it helped me direct their practices as competition neared.
- 2) Each week, I prepared 10 or so lists of 25 words. In competition, it's likely that the list will be on a flip notebook of index cards or an electronic device that shows one word at a time. I titled the list by date and list number: "April 1, 2011 List 1." I tried to make the lists contain old and new words, easy and hard words.
- 3) I printed out two copies of each list. I cut one list into slips of paper with one term per slip and put these slips in a foam cup labeled with the list number. The other copy remained intact and later added to a notebook. So, if we were practicing ten lists, there would be ten foam cups.
- 4) At the beginning of each practice, I went over about 20 new terms that they've not drawn before but will see in the day's practice. They decide the best way to draw these terms. I don't go over all the new terms at this time though since they need to develop the skill of drawing things they've not considered before.
- 5) Early in the season, we don't use a 4 minute countdown timer. Instead, we use a count-up timer to see how long it takes to go through the list. I start the timer as I show the first slip of paper from the cup to the drawer. We go through all the events, pausing the timer if the teammates want to talk things over. At the end of the list of 25 words, we find the sheet of

paper with the list on it and we take notes. We mark those we passed on (and they can be sure to see them in the next few weeks!) and we discuss WHY we passed and how to draw them. We go through all the terms to see if there is an easier way to draw it, google its definition if it's a new term, and decide which words were easy, which were difficult, and which were "impossible." After the practice is over, I will record how they did on the spreadsheet and that will help me when I write future lists.

- 6) Later in the season, we still practice with a count up timer, but also will practice with a countdown timer to be more like competition. This helps the one drawing develop the skills of when to pass and when to attempt.
- 7) As we finish each of the 10 practice lists, we dump the papers into a huge box that we can use for additional practice if we run out of terms and they are still wanting to do more. We also put frequently missed terms in a different box. They are repeated several times in a day until they know how to draw them. The big box allows for endless practice! If we found we had five extra minutes, it took no time to grab a handful of paper slips and just do them!

Good luck!