



Handout 7.7: Problem Scan, Idea Filter, and Role Cards

Unit 7, Lesson 7.7. **Print pages 1 and 2 one per student. Print page 3, the role cards, one per team of three, on card stock if you have it.**

Team members: _____

Date: _____ Period: _____

Page 1: Problem scan

Visit three of the six signs. Under each one, write problems you have **actually seen**. Not problems you imagine. Drawings count. One word counts.

Sentence frame, four languages *[check with a native speaker]*

English	Turkish	Portuguese	Spanish
The problem is . has this problem.	Sorun . Bu sorun 'da var.	O problema é . tem esse problema.	El problema es . tiene este problema.

Sign 1: _____ (FOOD, MONEY, FAMILY, HOME, CLOTHING, or WORK)

Problem I have seen	Who has it

Sign 2: _____

Problem I have seen	Who has it

Sign 3: _____ (one of your three stops must be WORK)

Problem I have seen	Who has it

Count your team's problems: _____ (target: at least 8 per person, 12 or more per team)

Page 2: The idea filter

Step 1: Twenty ideas. No criticism.

Six minutes. One idea per sticky note. For each problem on page 1, what could you make or do that would solve it? **Nobody says “that’s dumb.” If you want to say it, say “later” instead.**

Our team’s idea count: _____ (target 20)

Step 2: Run every idea through three questions

Cross out any idea that fails **any one** of the three. Do not argue about it. Cross it out.

	The question	Why it matters
1	Is the problem real? Has somebody in this room actually had it?	If nobody has the problem, nobody pays.
2	Could three middle schoolers actually build or do this in five days with what is in this room?	You pitch on Friday. Not next year.
3	Would anyone pay for it, and roughly how much?	Free is not a business.

Write your surviving ideas here.

Idea	Q1 real?	Q2 buildable in 5 days?	Q3 would pay? About how much?

Step 3: Rank the survivors

Rank	Idea
1	

2	
3	

Grade 8 line, fourth filter question: Who is already solving this problem, and what would make somebody choose you instead?

Already solving it: _____

Why somebody would pick us: _____

Step 4: The gate. Hand this in before you leave.

Our idea: _____

It is a product / service (circle one)

The FACS module it connects to (circle at least one):

FOOD (Units 1 and 6) | MONEY (Unit 2) | FAMILY (Unit 3) | HOME (Unit 4) | CLOTHING (Unit 5) | WORK (Unit 7)

Our one-sentence reason:

Our idea connects to _____ because _____

Sentence frame, four languages *[check with a native speaker]*

English	Turkish	Portuguese	Spanish
Our idea connects to ___ because ___.	Fikrimiz ___ ile bağlantılı çünkü ___.	Nossa ideia se conecta com ___ porque ___.	Nuestra idea se conecta con ___ porque ___.

What we are physically handing a judge on Friday (one sentence, be specific):



Our roles:

CEO: _____ CFO: _____ CMO: _____

Signatures (all three):



Teacher initials (the gate): _____

Page 3: Role cards

Cut these three apart. One per team member, kept in a pocket or taped inside the team folder.

Read this line out loud before you pick: nobody is the boss of the other two. Every role does real work, and every role's name gets said out loud on Friday.

CEO

Name: _____

You own the idea, the pitch, and the clock.

Your jobs:

- Write the **business brief**: the problem, who has it, the product or service, one thing that makes it different, and the FACS module sentence.
- Write **panel 5, the ask**.
- Say the **hook** and the **ask** in the pitch.
- **Call the time**. Twice a period, out loud: "We have __ minutes left."
- When the team is arguing instead of working, say so and pick.
- On Friday: take the first judge question unless the team picked somebody else.

On Friday a judge may ask you: "What is your margin?" You have to know it without looking at the poster.

You are the right CEO if: you can keep three people moving without being mean about it, and you can make a decision when two people disagree.



CFO

Name: _____

You own every number.

Your jobs:

- Build the **numbers page**: unit cost line by line, price, margin per unit, fixed cost, break-even in units, one-month projection.
- **Sign the numbers page**. Your signature means the arithmetic is right.
- Draw **panel 4** so the numbers can be read from ten feet away.
- Say the **money sentence** in the pitch.
- On Friday: answer “what does one cost you and what do you charge” without hesitating.

Your sentence to memorize: “We stop losing money after ___ units.”

You are the right CFO if: you like numbers, you are careful, and you are willing to be the one who says “that does not add up.”

CMO

Name: _____

You own the customer, the look, and the prototype.

Your jobs:

- Run the **three customer interviews** and write the answers in the customer's **own words**, including one quote each.
- Write **panels 1, 2, and 3**: the problem, the solution, the customer.
- Lay out all five panels so somebody reads them in the right order.
- **Build the prototype** or lead the building of it, using a skill from this year.
- Say the **problem** and **who it is for** in the pitch.
- On Friday: name one real person who said they would buy it, and what they said.

You are the right CMO if: you can talk to people you do not know, you can draw or lay something out, or you built something good this year.

If you are stronger at drawing or building than at writing, CMO is your role and you should say so out loud.

All three of you

- Know **all four numbers**: unit cost, price, margin, break-even.
- **Speak part of the pitch**. How much is up to you.
- Be able to say the **FACS module sentence** from memory.

How to pick, if nobody wants to decide

Answer these three questions out loud as a team. Do not vote. Talk.

1. **Who kept the team on time during the Unit 6 cook day, or during any group project this year?** That person is a strong CEO.
2. **Who did the arithmetic when the team had to cost something?** That person is a strong CFO.
3. **Who built, drew, sewed, or laid out the thing that came out best this year?** That person is a strong CMO.

If two people want the same role, the one who has **not** had that kind of job before takes it. You have one week left in this course and this is the last chance to do a job you have never done.

Teacher key

There is no answer key for the problem scan or the ideas. The checks are structural.

The count check at the end of Step 1. Every team says its idea count out loud. **Under 15 means the team was evaluating while generating.** Sit with that team for 60 seconds during Step 2 and model crossing out loudly and cheerfully, so they see that throwing ideas away is the fun part, not the sad part.

The gate check at the door. Read every team's page 2 and ask one question of every team, and it is always filter question 2 in some form: **"What are you physically handing a judge on Friday?"** A team that cannot answer in one sentence does not have a project; it has an idea. Narrow it with them on the spot and write the narrowed version on their sheet:

Too big	Narrowed, on the spot
An app	Two hand-drawn screens with every button labeled
A restaurant	One dish, plated, with a printed menu card and a price per serving
A clothing brand	One hand-sewn item with a price tag and a care label
A tutoring business	One printed service card: what you do, what it costs, when you are available, plus one worked sample
An organizing service	One scale floor plan of a real 10 by 12 room, before and after
A babysitting service	One activity kit card: what is in the box, what age, what the child does

Do not let the whole class pick a snack business. Push two or three teams toward clothing, home, or family, and name the unit skill they already have. The module connection rule is what makes this a FACS capstone, and it only works if the modules are spread across the room.

Starter problem list for grade 6, or for any team whose scan came up short. Give this only after they have tried.

Area	A problem somebody actually has
FOOD	Lunch gets boring and nobody has time to make something different.
FOOD	You want a snack after practice and there is nothing in the house that is ready.
MONEY	You get money at a birthday and it is gone in a week and you cannot say where.

MONEY	Two younger siblings need the same thing and there is money for one.
FAMILY	A four-year-old is bored in a waiting room and there is nothing to do.
FAMILY	An older relative cannot read the small print on the medicine bottle.
HOME	A shared bedroom has no place to put anything and two people keep fighting about it.
HOME	Everybody in the house loses the same three things every morning.
CLOTHING	A favorite shirt has a small hole and nobody knows how to fix it.
CLOTHING	Clothes get outgrown in four months and thrown away.
WORK	A student wants a summer job and has no idea how to apply.
WORK	Nobody in the building knows which students can do which skill.

Role assignment. Do not let the loudest student always be CEO. The “how to pick” questions on the card exist for this, and you have the records: the Unit 6 Station Manager who kept the clock, the student who caught the arithmetic error on the costing sheet, the student whose upcycle item came out best. Say those names out loud to those teams.

Teams of three, assigned by the teacher. Four means one student watches. Student-chosen teams mean somebody is picked last in the last week of school.

Scoring: the problem scan and the filter sheet are scored complete, partial, or missing for daily work. **The signed gate section is not a grade, it is a gate:** no signed sheet, no next step, and the team gets a three-minute conference at the start of Lesson 7.8 with a narrowed version of their own idea.

Note: these role cards are written fresh. Sal’s own team formation and role decision sheets, which used the same three C-suite titles, were not available in the source folder. *[Sal: replace with your originals if they turn up. Keep the titles either way; students take real titles seriously.]*