Exploration is traveling in or through an unfamiliar country, where you don’t know what you’ll find, and you won’t be sure how to interpret things. It’s where you’ll learn the most if you’re alert, interested, and thoughtful. Or, exploration is investigation, inquiry or examination. from Latin explorare (search out), from ex– (out) + plorare (utter a cry).
You are no doubt already a good communicator. You get along very well in the world. But, like everyone, you also no doubt miss things from time to time, or perhaps misinterpret things. Or encounter situations that test your confidence. The Institute surveyed its graduates some years ago, and asked them what they actually do in their professional lives. The answer is a part of why we’re doing this exploration together.
Professional scientists and engineers spend most of their time talking and writing. (The talk/write balance is probably more equal now, with email.) From time to time, they get to do science of engineering. You will leave here with the ability to do excellent science and engineering. We want you to leave with an ability to communicate that is a match for the quality of your work.
This program, Listening as Exploration, will not be a set of directions for what to do or how to do it. It will ask you to examine your communication directly, as communication. You will observe yourself and others, and begin to notice the strange and wonderful world of human communication and collaboration. At the same time, you will expand your effectiveness in a wider range of situations.
You can get the “how to do it” information from any of hundreds of books. (The photos above, selected at random, are probably perfectly useful as sources of ideas.)
But, in much the same way that a book on baseball isn’t the surest way to learn to play, it’s hard to learn collaboration from a book, even if the information is solid and useful. Collaboration, like baseball, requires physical and emotional activity, practice, experience, and, most of all, other people. Even if you understand a lot about it, you’ll won’t really learn to collaborate without experience and practice.
Besides, most of the information you really need is already communicated, clearly and succinctly, on the 2.009 website. Be sure to read it there!
For this project, we will ask you to strive towards compliance with three essential ground rules. Note that none of them can be “followed.” They all need to be stewed in, or wrestled with. Explored.
You might wonder why being curious is a ground rule. You already are. You do it. You know what it is. But what if there’s something about curiosity that you don’t already know? Something you’re blind to? Consider that, and see what you discover!
Ground Rules for our Teamwork:

Be curious.  Be respectful.

You are certainly a respectful person! Well, except for that one person, over there, who really *is* a jerk! You can’t be expected to be respectful of them!!
Ground Rules for our Teamwork:

Be curious.  Be respectful.  Be responsible.

Same with responsible.  You are entirely responsible.  The homework?  Well, gee, the dog ate it.  Couldn’t be helped.  Not my fault....  We say that the pointy finger of blame, when turned around towards you, becomes the pointy finger of responsibility.  What do you see if you consider, with curiosity, your role in the dog eating your homework?
So notice that our three ground rules are about ways of being. They’re not things to do.
So up until this point, you’ve been exploring with your teams, brainstorming, getting to know each other, engaging in a process that’s new and exciting, with people who may be new to you. Everything is possible! No idea is a bad idea! What have you noticed so far? What’s going on with your teams?
Oh, right. Some people are too busy to get their work done. Not committed. Don’t care. Don’t deliver. Do all the work. Try to boss everyone. Want to run the show. Complain. Won’t listen. Won’t talk. Sulk. Laugh too much.... Darn it!
So we’re going to say that these four issues are common among teams. And each of them comes into existence through communication, and each can be addressed, and sometimes even solved, with communication. We’ll come back to this idea, and this list, in a bit.
OK, back to exploring, and learning about communication and collaboration. What’s the plan? What are we going to do?
The plan is to develop awareness of and strategies for strengthening key components of teamwork:

• trust
• emotion
• planning
• perception
• common ground

Here’s the plan. We’re going to explore these five things in depth. Not sequentially, not even especially logically, in fact quite circuitously. But in depth. Over the next month. Your deepening experience of each of these aspects of collaboration will give you many new ways to relate to collaborative work. It is our hope that you will use this learning, and pass it on to your teammates.
We’ll start with planning: the thinking part, and the doing part.
How can planning be used to mitigate, prevent, or solve these common team issues?
COMMON TEAM ISSUES:

- Time management.
- Resolving disagreements.
- Equitable workload.
- Everyone being heard.

planning
COMMON TEAM ISSUES:

- Time management.
- Resolving disagreements.
- Equitable workload.
- Everyone being heard.

You brainstormed, and came up with some planning tools, such as Google calendar. That’s fine. But unless you actually talk with each other about your schedules, your crunch times, your need for predictability, your ability to be flexible on any given day or week, you haven’t yet planned optimally.
Many disagreements can be *prevented* by planning. Establish ground rules, and get your team members’ buy-in for common disruptive behaviors. Discuss decision-making tools, and agree on how your team will decide under the various circumstances you’re likely to face. Think ahead to what you’re likely to disagree about, and ask your instructors and mentors for insight as well. Then make plans to maximize learning and minimize disruptions from these common disagreements.
COMMON TEAM ISSUES:

- Time management.
- Resolving disagreements.
- Equitable workload.
- Everyone being heard.

One of the most common complaints in collaborative work at MIT is that some team members “care” and “do the work,” while others team members “don’t care,” or “have other priorities,” or “disappear and leave the work to the rest of us.” Maybe you’ve even done some of that at one time or another. Usually, it’s not lack of caring that’s the problem—–it’s lack of planning. Look at each person’s schedule in advance. Identify the weeks for each of you when you won’t be able to be in 2.009 lab much. Identify the weeks when you will be able to put in extra work. Incorporate that information into your planning.
A major source of lost opportunities—of good ideas going down the tubes without a fair hearing—is the quiet people on the team not being fully heard. So make a plan for how your team will ensure that everyone’s voice is fully heard. Find the balance of (a) making sure each individual accepts responsibility for being heard; and (b) making sure each team member looks out for the others. Under pressure, some people get louder and some people get softer. Plan for it, so you don’t lose good ideas in the fray.
COMMON TEAM ISSUES:

Good teams don't just happen.

} planning
to be persuasive, we must be believable;
to be believable, we must be credible;
to be credible, we must be truthful.

Edward R. Murrow, 1908-1965, television news pioneer
producer of news reports leading to the censure of Joseph McCarthy
The groundwork of a good team is trust in each other, willingness to make mistakes, willingness to speak out, willingness to be wrong, willingness to critique, willingness to be honest, willingness to work until difficulties and disagreements are solved. What does this take? Where does it come from?
Trust and genuine influence are closely related, as this research shows.
This grid, known as the JoHari window, is a conceptual tool for understanding what happens as information flows among people. It represents all knowledge about, say, you.

<table>
<thead>
<tr>
<th>JoHari Window</th>
<th>known to self</th>
<th>unknown to self</th>
</tr>
</thead>
<tbody>
<tr>
<td>known to others</td>
<td>PUBLIC</td>
<td></td>
</tr>
<tr>
<td>unknown to others</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


There’s public information that anyone could know about you: you have brown eyes.
<table>
<thead>
<tr>
<th>JoHari Window</th>
<th>known to self</th>
<th>unknown to self</th>
</tr>
</thead>
<tbody>
<tr>
<td>known to others</td>
<td>PUBLIC</td>
<td></td>
</tr>
<tr>
<td>unknown to others</td>
<td>HIDDEN</td>
<td></td>
</tr>
</tbody>
</table>

There’s hidden information, that others can only know if you tell them. What are your hobbies? What are your aspirations? What’s your shoe size?
Then there’s this bothersome category of things that people can see about you that you can’t see about yourself. You learn about this category when you ask about it. Sometimes this is called getting feedback. Sometimes it’s just called talking to people you trust.
Finally, there’s all the information about you that is unknown, both to you and to others. This information can be revealed in many ways over time.
Information moves from “hidden” to “public” squares when you talk to people, or when people ask you questions and you answer them.
Information moves from blind to public when people tell you what they see, or when you ask them for feedback or input.
Information moves out of what’s unknown into any of the other three categories at any time, under many kinds of circumstances. So these quadrants change shape, size, and importance over time.
Now, for a change of pace, here is an exercise for your imagination. Think of something you screwed up, in a minor way. An annoyance, not a catastrophe. (Later, you’ll see the value of this exercise for all manner of things, but start with a moderate mistake.)
IMAGINE THAT IT'S

With that thing you screwed up in your mind, imagine it in each of the following 8 ways.
Imagine that it was a right (either the thing you screwed up, or the fact that you screwed it up). Then imagine that it’s wrong. Imagine it’s good, and then imagine it’s bad. Notice that you don’t have to *believe* it’s good or bad--just imagine it. Imagine that someone else may perceive it as good or bad, even if you don’t. Change your mind about it. Change the context in which you hold it. Make your mind flex about it. Do this 8 times.
This is a very valuable mental exercise when you sense that our own point of view may be limiting how clearly you can see something. Run that thing through this grid of value judgments, and see if you can loosen up your thinking about it. Or run that person through this grid of value judgments, and see if you can come up with a way to understand them better.
The plan is to develop an array of practical communication tools for strengthening key components of teamwork:

• trust
• emotion
• planning
• perception
• common ground

Now back to the five aspects of teamwork we looked at earlier. We said these would be the five areas in which we would develop your collaborative strengths over the course of these workshops: trust, emotion, planning, perception, common ground.
Next, we’ll look at trust. What is trust? What is it for? Why is it important? How can it be created? Developed? Broken? Repaired?
Trust exists outside of language. If I tell you that you can trust me, I’ve done nothing to engender trust. (In fact, telling you might actually make you suspicious!) Trust takes two: one to expose a vulnerability, the other to fail to exploit it. It also takes time. The vulnerability must be shown. The attack must be withheld.
Trust consists of two communications: “I could.” “But I won’t.” This transaction can happen by accident or by design. I can tell you something about me that makes me (a bit) vulnerable. You can either exploit that, or not. I need to be responsible for not opening up too much; if I expose a weakness, I want to feel certain that, even if you exploit it, I’ll survive. Then, the next time, I can expose something a little more risky, and see whether you exploit it. And so on.
Trust requires awareness of emotion, perception, and potential common ground. We will examine these components of collaboration a bit at a time.

To start, imagine what emotions you want to have about the work that you do?
Complaining, emotion, perception, and common ground: how might they be related?
How much would it be worth to you to get people to STOP COMPLAINING?
Complaining can take up a lot of time and energy: resources that can be used to solve problems. But what if your team declared, “No complaining” as a ground rule? What if your team focused on converting complaints into solutions?
Explore the point of view that underneath every complaint, there’s a request waiting to be made.* Sometimes the complainer is aware of it, but often not.

*adapted from Building Trust: In Business, Politics, Relationships, and Life by Robert C. Solomon and Fernando Flores
COMPLAINING = UNSTATED REQUEST

What does this tell you about complaints?
To help people
STOP COMPLAINING,
To help people
STOP COMPLAINING,
help them make their REQUEST.
To help people
STOP COMPLAINING,

help them make their REQUEST.

Ask questions that will help them:
- understand what the real concern is, and
- figure out what they really want to do.
Here is one of the most useful communication tools: questions! And in this case, a certain protocol of questions that explores what may be previously unknown about a problem, concern, or complaint. First, try this out on a person you trust, on a problem that’s real but not huge. Ask them exactly as they’re written here, even though they may feel uncomfortable. Stay curious.
ASK:

How is that a problem for you?
And what is it about that that’s a problem?
Anything else?
What would having that do for you?
So what you really want is...
And what would having that do for you?
What would you rather have?
Sometimes in the course of asking these questions, you feel you’re about to sound stupid, insincere, invasive, boring. In fact, you may feel any of these things in a number of different communication contexts. Framing is another tool to help you say what you need to, despite feeling uncomfortable about it.

Simply put, you state your intention explicitly.
This is an invaluable tool. You should use it a lot. It can clarify, smooth over, prevent, reassure, explain, persuade.... It is a metacommunication that can get you and your audience onto the same page when trust is not yet sufficiently developed to carry a complex communication.
Note: don’t ask “WHY” questions. “Why?” collapses the personal and the problem. It very often has a pointy finger embedded in it, whether intended or not, as in, “Why did you do that? (you idiot!)”

Rephrase: “What had you do that?” “What was it about that book that you liked?” “How did you choose that restaurant?” Eliminate “why” from your interpersonal vocabulary entirely, and prevent a lot of misunderstandings.
Try the question protocol whenever you think there might be more to learn in a situation. See what you learn from it. It may confirm what you already thought, or it may produce information that surprises you. It is a tool to help you and your audience listen more acutely.
NOW, THINK OF A PERSONALITY TRAIT THAT ANNOYS YOU.

Try the imagination exercise again, this time with a trait that other people have that you find annoying.
Now, think of a personality trait that annoys you.

You might want to try a trait that’s a little more challenging or provocative than you used last time, something you have slightly stronger feelings about.
This is gymnastics for the collaborative mind.... Being nimble about changing your own point of view can help you be more effective with others‘ varying points of view.

Notice whether there are some qualities, people, problems that you just can’t imagine in one of these states. Why might that be?
HOMEWORK:

due via email to 2009cr by 10/13 midnight

1. Observe your teams. Consider trust, emotion, planning, perception, common ground, and whatever else you notice.

2. Read “Running a Meeting” on the 2.009 site. Do what it says :) In addition, find 2 challenges you expect your team to encounter. Apply planning.

3. Find three situations where you can question someone to learn more about their complaint or concern. Use the questioning protocol, and see what you learn from it.

* Extra credit: When it occurs to you, make something right, wrong, stupid, smart, good, bad, better, worse.

Now, start exploring how to put this all to work for you and your team. Remember, be curious, respectful, and responsible. Recommendation: enjoy!
If you have questions or thoughts, let us know: 2009cr@mit.edu.

We’d love to hear from you.
LISTENING
as exploration (part I)
is over.