Baseball

- A subtle and complicated game for two teams
- Rulebook is 136 pages long!
- Played widely in USA, Canada, Japan, Cuba, Dominican Republic, and some other countries
- Each team typically has 15-25 players, but only 9 defensive players and up to four offensive players are active at any one time.
- Substitutions are permitted during the game, but once a player leaves the game, he/she cannot return
- A game typically consists of nine “innings”
- In each inning each time takes a turn at offense and defense; these are “half-innings”
- Goal of the game is to score more “runs” than the other team at the end of the game.
Equipment

• The bat:
  • made of wood or aluminum
  • no more than 42 inches (110 cm) long
  • usually weights 33-36 ounces (0.94 to 1.0 kg)

• The ball:
  • 2.9 inches in diameter (7.3 cm)
  • cork or rubber center
  • wrapped with up to 1 mile (1.6 km) of yarn
  • cowhide cover
  • stitches enable complex aerodynamics

• The glove:
  • also called “mitt”
  • made of leather
The Field

- Field is divided into “infield” and “outfield”
- The infield is called a “diamond” because of its shape.
- The batter stands in front of the catcher and attempts, with a “bat”, to hit the ball thrown by the pitcher, and then run the bases.
- The fielders (defense) try to catch the batted ball.
- There are four “bases”, called “first”, “second”, “third”, and “home”.
- All bases are square canvas bags, except home, which is pentagonal and flat.
- Fences delimit the “outfield”, and are typically 250-400 feet (75-125m) from home.
There are nine defensive players on the field at any moment. They wear gloves. The pitcher throws the ball towards the batter. The catcher catches it (if the batter has not hit it). “1st basemen”, “2nd basement”, “3rd basemen” typically stand near their bases. “shortstop” stands between 2nd and 3rd bases. these four are called “infielders”. “left fielder”, “center fielder”, “right fielder” stand further away from the batter and are called “outfielders”
Offense (Batting)

- Nine players of offense take turns batting, according to order established at beginning of each game; after 9th, 1st bats again.
- If the batter successfully hits the ball and it enters the quarter-plane defined by the diagonal lines that delimit the field, the ball is “fair” and “in play”.
- Defensive players try to catch the ball and/or tag the runner, or the base.
- If the batter successfully reaches a base without the ball caught or being tagged out, it is a “hit”.
Balls and Strikes

• During an “at-bat”, the pitcher tries to throw the ball through a certain volume of air called the “strike zone”.
• The “strike zone” consists of a column of air with a pentagonal base above home plate, and between the batter’s armpits and knees.
• Two cases: batter swings the bat or doesn’t
  • Doesn’t swing: if the ball is thrown and touches the strike zone, it is a “strike”; otherwise it is a “ball”
  • Swings: if the ball is missed, it is a strike. If hit foul, it is a strike. If hit fair, it is “in play”.
• three strikes and the batter is out; four balls and the batter can go to first base (called a “walk”)

[Diagram of strike zone with labeled areas: Top of shoulders, Mid point, Top of pants, Hollow beneath kneecap]
More About Batting

• If the batter hits the ball outside the quarter-plane, it is called "foul".
• A foul ball is considered a strike if there are less than 2 strikes; otherwise it does not count at all.
• If the batter hits a fair ball out of the stadium, it is a "home run" and he can run around the bases to score a run.
• If the batter hits a fair ball that bounces over the wall, it is a "double" and the batter can go to 2nd base unhindered.
Offense (Batting)

• Each half-inning consists of three “outs”
• An “out” occurs when a defensive player
  1. catches a batted ball in the air before it hits the ground (whether fair or foul), or
  2. fields a fair batted ball on the ground and tags the runner not standing on a base, or
  3. in some circumstances, tags the base the runner is trying to reach, or holds the ball while touching base with foot.
  4. As we said before, if a batter gets three strikes, he is out.
Pitching

• The pitcher stands 60 feet, 6 inches (18.4 meters) from the batter on a slightly elevated area called the “mound”
• He throws the ball at approximately 75 to 100 miles per hour (100 - 160 km/hour)
• There are many different types of pitches, but the three main ones are the “fast ball”, the “curve ball”, and the “change-up”
• Pitched ball reaches catcher in about 0.45 seconds, so batter must decide almost instantly whether to swing the bat or not.
• Starting pitcher typically pitches 5-8 innings; “relief pitchers” take over near end of game

Don’t ask me to explain what a “balk” is!
Running the Bases

• Once a batter successfully reaches a base without being “out”, he becomes a “runner”
• Bases are traversed consecutively in a counter-clockwise direction.
• A runner can stand on a base without being out.
• The opposite of being out is being “safe”; if runner is tagged with the ball while not standing on a base, he is “out”
• No more than one runner can occupy a base at any time
• If a batter hits a ball on the ground while a runner is standing on a base, the runner must run to the next base if all bases in between the batter and runner are occupied. Otherwise he is not forced to run, but can choose to do so.
• If a runner is forced to run as above, he is “out” if a defensive player with the ball tags him, tags the base in front of him before he reaches it, or holds the ball while touching the base with a foot.
• Otherwise the runner himself has to be tagged with the ball (or with a glove holding the ball)
Scoring Runs

• If a runner makes it all the way around the bases and then reaches home, it is a “run”
• Goal of the game is to score more runs than the other team
• Games end in 9 innings, except if score tied after 9
• If game is tied after 9 innings, the game goes to “extra innings” until the tie is resolved
• longest major league game was 26 innings in 1920
Other Rules

- If pitcher hits the batter with the ball, batter can advance to first base ("hit batsman").
- Runners can “steal” bases, which means advancing to the next base without being tagged out.
- Multiple outs can be made on the same play, so people speak of “double play” and “triple play”, which means two (resp., three) outs.
- If a ball is caught in the air, a runner can try to advance to the next base, but only after the instant of the catch.
- Running to first after batting is an exception to the “you are out if you are tagged while off the base” rule; runners can run past first without being tagged out provided they turn right after passing the base.
Sliding

- Runners advancing to the next base are faced with a dilemma: they have to get to the next base quickly to avoid being out, but they cannot “overrun” the base (because only *on* a base are you “safe”).
- To solve this problem, runners must decelerate quickly
- This is done with a “slide”: runners use friction between the ground and their legs to slow down
Bunting

• In some cases good strategy says to just barely hit the ball
• the goal is to advance a runner to the next base at the possible cost of being out yourself
• this is called a “sacrifice”
• when a batter “chokes up” on the bat and hits it softly, it is a “bunt”
• another rule exception: a foul bunt on the 2d strike is an out
Statistics

• Balls and strikes are reported in that order, called the “count”. A count of “3 and 2” means 3 balls and 2 strikes.
• The scoreboard records the score in each inning, and sometimes the total of runs, hits, and “errors” (mistakes made by the teams).
• Batting average records number of hits divided by number of times at bat; a good average is 0.300 (read as “three hundred”)

![Scoreboard Image]
Other Participants

- **Manager**: person who runs the team, decides order of batters, who will pitch, when to substitute players
- **Umpires**: people who rule on balls and strikes and whether batters and runners are out or safe; can eject unruly players
  - Umpire has various gestures to denote strikes, outs, fair or foul, and safe.
- **Coaches**: stand outside fair area and tell runners whether to advance to the next base or stop where they are.
Organized Baseball

- In North America, two major leagues, American and National
- Each league has three divisions
- Each division has 5 teams
- For example, the Toronto Blue Jays play in the Eastern Division of the American League
- Team that has most wins in a division (after 162-game season) advances to playoffs
- Final playoffs pit winner of American League against winner of National League, and is called the “World Series”
Organized Baseball

- There are also “minor” leagues that serve to recruit and train players for the majors.
- Only about 10% of all minor league players advance to the “majors”.
- “Semi-professional” or “semi-pro” teams consist of players that are typically not paid, although their expenses may be paid.
- The Kitchener Panthers are an independent semi-pro minor league team in the Intercounty Baseball League. They were founded in 1919.

League Standings

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